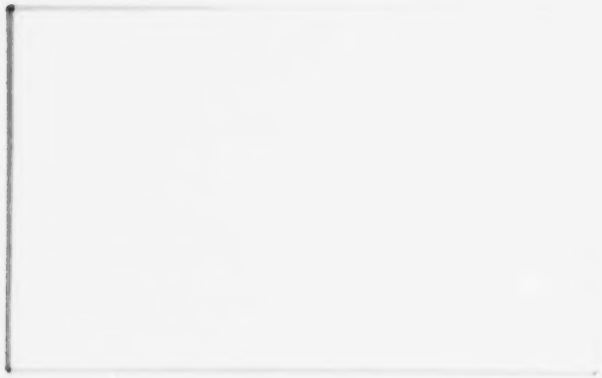
User Report

Female Adolescent Aggression: A Review of the Literature and the Correlates of Aggression[1]

2000-04

Solicitor General Canada

Canada



103-03010/

Alan W. Leschied and Anne Cummings
Faculty of Education
The University of Western Ontario
London, Ontario, Canada

and
Michele Van Brunschot and Alison Cunningham
Family Court Clinic
London, Ontario, Canada

and
Angela Saunders
OISE/University of Toronto
Toronto, Ontario, Canada

Female Adolescent Aggression: A Review of the Literature and the Correlates of Aggression[1]

2000-04

[1]This report was provided to the Solicitor General of Canada under contract number 9914-UNI-587. The support of Dr. Jim Bonta, Chief, Corrections Research of the Ministry, is greatly appreciated. In addition, we acknowledge Irving Kulik of the RCJNet, who supported this work in encouraging our efforts early on. Technical advice and support was obtained from Dr. Linda Simourd of Kingston Ontario, Dr. Paul Gendreau of the Centre of Criminal Justice Studies at the University of New Brunswick, and Dr. Bob Sandieson and Nicole Heilbron of the Faculty of Education at the University of Western Ontario.

The views expressed are those of the authors and do not necessarily reflect the views of the Department of the Solicitor General Canada. This document is available in French. Ce rapport est disponible en français sous le titre: *La violence chez les adolescentes: Étude documentaire et corrélations.* This report is also available on the Solicitor General Canada's Internet Site http://www.sgc.gc.ca

Public Works and Government Services Canada
Cat. No.: JS4-1/2000-2E
ISBN: 0-662-28720-7

Abstract

This review of the literature focuses on aggression and girls. Recent evidence from Statistics Canada has reported on the increase of female adolescent aggression in official crime statistics. This reporting has created considerable interest in a heretofore largely ignored area of childhood maladjustment. This review provides a context on the violence literature with adolescent girls through first, reviewing the aggression literature with girls under the age of twelve years and second, providing a summary of the correlates from the aggression literature with adolescent girls. Important differences regarding the development and expression of aggression with girls in contrast to boys is provided. In the context of what is acknowledged to be a limited literature, there are important themes for human service providers and policy makers to consider in examining assessment, treatment and prevention strategies for aggressive adolescent girls. Finally, an orientation towards furthering a research agenda in the area of adolescent aggression with girls is provided.

TABLE OF CONTENTS

	Page
General Orientation and Organization	1
THE FREQUENCY OF AGGRESSION AMONG ADOLESCENT GIRLS	3
Overview	3
Canada is Not Alone	7
Influence of the Juvenile Justice System as a Process	8
General Prevalence Rates of Aggression with Girls	9
Issues of Definition and Incidence Rates of Violence	10
Summary	11
AGGRESSION AND GIRLS UNDER THE AGE OF 12: CONCEPTUAL ISSUES	12
Age of Onset and Developmental Stability of Aggression in Girls	12
Systemic Influences Related to Childhood Aggression in Girls	14
• *General Socializing Factors*	15
• *Family Factors*	15
• *Peer Influences*	17
• *School Factors*	17
Effects of Specific Trauma	17
Cognitive Factors	18
Social Information Processing Theory	19
Comorbidity with Other Psychiatric Factors	19
The Gender Paradox	20
Effects of Televised and Video Violence	21
Summary	22
CORRELATES OF AGGRESSION IN ADOLESCENT GIRLS	23
Methodology	23
Types of Aggression by Adolescent Girls	24
Cognitive Variables Associated with Aggression in Adolescent Girls	33
Systemic Factors Associated with Aggression in Adolescent Girls	38
• *Family Factors*	38
• *Peer Factors*	43
• *School Factors*	44
Substance Use Variables Associated with Aggression	45
Personality Factors Associated with Aggression in Adolescent Girls	49
Critical Life Events and Their Association to Adolescent Female Aggression	51
A Framework for Synthesizing Major Findings from Empirically Supported Associations of Aggression and Factors in the Lives of Adolescent Girls	52
Measurement Issues	55

IMPLICATIONS OF THE RESEARCH TO DATE 57
Thoughts on a Research Agenda 59
Within Subject Comparisons 60
Stability and Predictability of Overt Aggression in Adolescent Girls 60
Relative Contribution of Internalized Disorders and Overt Aggression in Girls 61
Understanding the Cycle of Victimization and Aggression 62
The Role of the Youth Justice System 62
Developing Gender Sensitive Assessment Measures 62
A Final Word 63

REFERENCES 65

General Orientation and Organization

This review of the literature is concerned with violence and adolescent girls. It is presented with the belief that a careful reading of that literature will further an agenda of understanding regarding the unique aspects of girls who display violent behavior. While it is acknowledged that, relative to the literature regarding violence with adolescent boys, the literature with girls may seem limited, our reading of what is available provides a basis for a serious discussion regarding the unique needs of girls who may be prone to acting in violent ways. Our conclusion is that there is an obvious need for professionals to begin to draw on assessment, treatment and prevention options that are sensitive to the unique needs of girls. Again, while the number of studies with girls may seem limited, it is not premature to begin exploring some of the potential findings that could relate to the unique human service needs of girls.

We begin within the context of the increasing rate at which girls are proceeding through the youth court in Canada for violent offenses. The report follows with a discussion of potential explanations for that increase with reference not only to problems of definition for childhood and adolescent aggression, but also to some of the unique aspects of the juvenile justice process itself that may affect violence reporting rates with girls.

The review of the prediction and assessment literature on adolescent girls' aggression is divided into two broad areas. The first area includes a section that reviews the literature relating general conceptual issues regarding female aggression, definitions and orientation, as well as the empirical literature with studies focusing on girls under the age of twelve years.

The second area, the major focus of this report, examines those studies on aggression and girls between the ages 12 to 17, the corresponding ages in Canada under the Young Offenders Act. This section summarizes those empirical studies that relate to the understanding of the correlates of aggression with adolescent girls and to possible measurement issues for risk prediction. This group of studies fit the criteria for inclusion by age and gender with data reporting an association of factors with girls and violence. The section concludes with suggestions for human service - assessment, treatment and prevention - reflecting an

understanding from the literature on adolescent aggression with girls to date on how a gender-sensitive human service delivery system in youth justice would appear. Finally, the report concludes with recommendations for furthering a research agenda in understanding violence and adolescent girls.

THE FREQUENCY OF AGGRESSION AMONG ADOLESCENT GIRLS

Overview

Concern with respect to violence and young people in Canada is now without precedence. Fear amongst Canadians for young people's out of control behaviour is at extraordinary rates (Gabor, 1999). This is despite the fact that Statistics Canada has now reported consecutive years of declining crime with young people. Particularly, violent crime amongst young people overall has shown a reduction over the past five years (StatsCan, 1999). However, both Doob and MacDonald (1998) and Dolmadge, (1995) suggest that the importance of the public's fear of youth crime is not to be dismissed. Advocacy and political action by the public with respect to crime is strongly motivated not so much by the *reality* of data, but by the *perception* of the degree of crime (Cullen, Wright, Brown, Moon, Blankenship & Applegate, 1998). Hence, both a perception and actual incidence rate of violence can combine to be powerful forces in the development of policy towards violent youth.

One area that relates both to the *perception* regarding an increase in violence, as well as an *actual* increasing incidence rate, is with adolescent girls. Violence with adolescent girls *is the only area consistently showing an increase in reported rates of violent offending* (considering both age and gender) in Canada (StatsCan, 1999).

> "Over the past decade, the violent crime rate of female youths has increased twice as fast as for male youths. In 1998, the rate of male youths charged with violent crime decreased slightly (-0.9%) while that for female youths remained unchanged." (*The Daily, Statistics Canada, July 21, 1999).*

Table 1 provides the overview of trends in youth crime for 1994 to 1998. While the rates have been decreasing for overall charges, Figure 4 portrays the increase in female violent charges during the same time period. In contrast, Figures 1, 2, and 3 portray the declining overall offending rate for violent and total offenses for males and for total offenses for females. While previous reports from Correctional Services Canada viewed the data in the mid-1990's regarding

suspected increases with some reservation (Dell and Boe, 1997)[2], more recent summaries have identified an increase in youth female violence (StatsCan, 1999). In addition, several high profile cases involving violence and adolescent girls in British Columbia and Ontario, covered extensively in the media, have heightened interest in this area.

[2]Dell and Boe (1997) indicated that there was no noticeable trend in youth female violence, though they did indicate that there was a steady increase from 1994 to 1996 with a return to the 1993 level. The national rate for female youth violence was set at 44 per 10,000. The largest area of increase was in robbery. In descending order, the highest to lowest rates of violent offending for female youths were: non-sexual assault, robbery, sexual assault and other sexual offenses, and attempted murder, homicide and abduction.

Table 1: Youths Charged in Criminal Incidents, *Criminal Code* and Federal Statutes, by Sex

	1994	1995	1996	1997	1998
All Offences					
Youths Charged	143,268	128,809	128,542	120,208	117,036
Male	114,087	101,407	100,654	93,674	90,721
Female	29,181	27,402	27,888	26,534	26,315
Criminal Code (all)					
Youths Charged	119,625	120,663	119,410	110,841	106,984
Male	95,430	94,649	93,187	86,180	82,677
Female	24,195	26,014	26,223	24,661	24,307
Violent Crime					
Youths Charged	21,629	22,441	22,521	22,172	22,145
Male	16,747	17,288	17,206	16,556	16,493
Female	4,882	5,153	5,315	5,616	5,652
Property Crime					
Youths Charged	68,907	68,105	66,702	58,340	54,047
Male	54,656	52,956	51,930	45,653	42,094
Female	14,251	15,149	14,772	12,687	11,953
Other Criminal Code Offences					
Youths Charged	29,089	30,117	30,187	30,329	30,792
Male	24,027	24,405	24,051	23,971	24,090
Female	5,062	5,712	6,136	6,358	6,702
Federal Statutes					
Youths Charged	7,470	8,146	9,132	9,367	10,052
Male	6,166	6,758	7,467	7,494	8,044
Female	1,304	1,388	1,665	1,873	2,008

Figure 1: Young Males Charged - All Criminal Offences

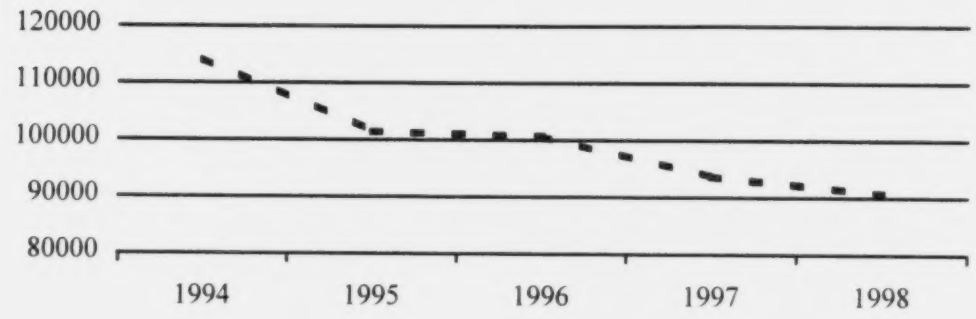


Figure 2: Young Males Charged in Violent Crimes

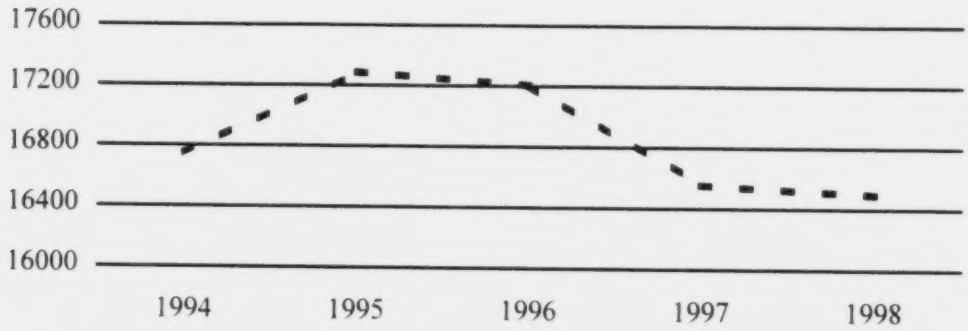


Figure 3: Young Females Charged - All Criminal Offences

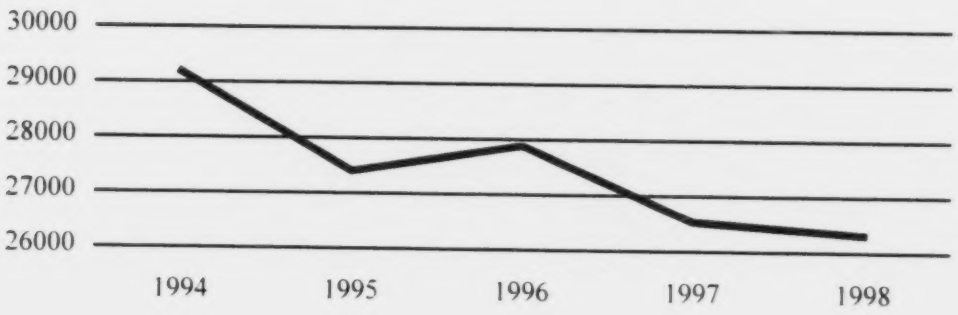
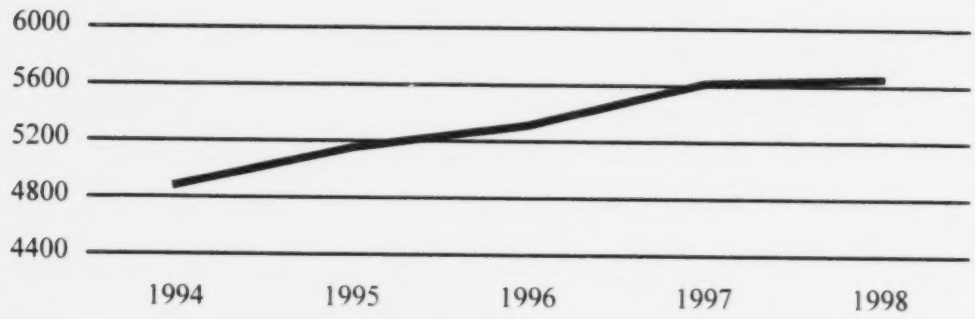


Figure 4: Young Females Charged in Violent Crimes



Canada is Not Alone

The recently released *Toward a Healthy Future. Report Number 2*, from Health Canada (September, 1999) noted that despite the fact that violent crime with young people between the ages 12 to 17 has declined in the past five years, it remains double the rate of a decade ago. In particular, this report indicated that while boys commit more violent crime than girls overall, the *rate* of girls charged with violent crimes has increased twice as fast as that of boys. While this increase can be dismissed in part as a base rate phenomenon with girls starting out at a much lower rate, the increasing number of girls proceeding through the juvenile justice system no doubt fuels the perception of adolescent girls being increasingly out of control. It also has increased the demand on existing youth community facilities to provide service for girls who are being charged with violent offenses.

Canada shares this increasing violent crime rate with adolescent girls in other countries (Berger, 1989). Hennington, Hughes, Cavell and Thompson (1998) reported that in the Untied States the general crime rate for adolescent girls has increased at a much higher rate than for any other segment of the population. In particular, the percentage of girls involved in violent crime increased by 103% during the period 1984-1993. However, it should be remembered that male adolescents continue to commit the majority of violent crime with a prevalence ratio compared to

female adolescents of from 3:1 to 12:1 depending on the exact type of violent offense reported (Borduin & Schaeffer, 1998).

Similarly, Burman, Tisdall and Brown (1998) noted in the United Kingdom that violence amongst adolescent girls has become an issue of increasing concern. A combination of both high profile cases covered in the media and data reporting more girls being seen in youth court in that country for violent offenses has created a sensationalistic aspect to the coverage. Importantly, these authors note the absence of a sound empirical basis on which to make accurate statements with respect to the significance of such increases. The absence of consistent data relating definitions of what constitutes aggression as well as a relative paucity of research on female adolescent aggression will be a theme revisited throughout this review.

Influence of the Juvenile Justice System as a Process

There is considerable commentary in the literature on the effects of the youth justice system in defining what constitutes a crime and its subsequent influence on female youth crime rates. While a full discussion of this issue is beyond the scope of this review, it needs to be acknowledged that discretion within the youth justice process itself may have some bearing on the official reporting of violent crime rates for adolescent girls. Horowitz and Pottieger (1991) have suggested that findings from data on the use of discretion in the U.S. suggests that girls may be charged with minor crimes to a greater extent compared to boys (this includes minor crimes of violence). This is reflected at both the arrest stage and adjudication. Chesney-Lind and Shelden (1992) have suggested that such bias reflects the paternalistic nature of the youth court, translated as increased protection afforded to girls who commit minor infractions in the community. The suggestion is also made that girls who commit minor assaults may be more inclined to be charged, for two reasons. First, as a measure of outrage that girls would commit *any* type of assault and second, as reflecting an increasing accountability for what is currently being seen as an aberration of adjustment for girls who were viewed as heretofore incapable of acting in a violent way (Chesney-Lind & Brown, 1999).

It is also worth noting that recent commentaries on the Canadian juvenile justice scene by Gabor (1999) and Reitsma-Street (1999) have identified concern with the increased rate of

violent crime with adolescent girls, though the significance of this shift is viewed differently by these authors. Gabor suggests that there is real evidence for the increased rate of violence with Canadian youth, including girls, reflecting a shift in cultural attitudes (i.e., the increase from the early 1980's to the mid 1990's) and growing intolerance for youth violence reflected in 'zero tolerance' policies in schools and communities. Reitsma-Street however views this trend to process more girls through the justice system as reflecting discriminatory practices and the heightened fear of 'girl crime' generally, despite what are actual low rates of official reporting.

The view towards seeing the youth justice system as discriminatory towards girls is of long-standing debate and has more than passing significance to a discussion on violence and adolescent girls. In part, reactions to girls and violence is generated by data, but also by societal reaction. The Elizabeth Fry Society of Alberta in 1998 set forth a discussion paper in part to address the sensationalistic reaction of the public to the StatsCan data regarding girls and violence (Elizabeth Fry Society, 1998). This summary, consisting of six myths of the perception regarding 'skyrocketing' increases in youth female violence, will be of interest to those who wish to review the arguments for placing this concern in a larger societal context (i.e., criminal justice/feminist perspective).

General Prevalence Rates of Aggression with Girls

Notwithstanding the debate on the conceptual issues regarding suspected biases in the youth justice system, concern with respect to youth violence generally, and with girls particularly, provides an opportunity to examine what the empirical literature says about the frequency of violence overall with young persons and girls in particular.

Generally, data suggests mixed conclusions with respect to the incidence rates of violence when gender is included in the equation. There appear to be as many studies identifying no differences as there are studies identifying the higher rates of violence with boys. Zoccolillo (1993) summarizes a series of epidemiologic studies reporting that no differences exist by gender in the prevalence of conduct disorder generally once base rates for the disorder are controlled. Matthews (1998) suggests that for adolescents, the incidence rate for adolescent violence is similar for first time violent offenders, and only reflects a predominance for males over females

when repeat offenses are factored into the analysis. What all studies suggest however is that estimating the rates for youth violence and gender is complicated by the definition of what is considered violent.

Issues of Definition and Incidence Rates of Violence

There seems little debate in the literature on the fact that males are involved in the vast majority of incidents of *physical* aggression. Indeed it is because of this fact that Pepler and Craig, (1999) suggest the literature on girls with aggression problems have been vastly under represented in the literature. Olweus (1987), in his important work on school bullying, initially did not even include girls in his study, reflecting that he did not perceive school violence relevant to girls at all; a perception that only shifted in his work in the mid 1980's.

However, as the definition of what constitutes violence is broadened, the data begins to reflect something quite different in terms of the representation of girls in violence categories. For example, Everett and Price (1995) suggest that while females are lower in rates of school violence when compared to males - when violence is defined as overt aggression - girls are proportionally more likely to appear in the data when verbal threats and intimidation are included. Crick and Price (1995) suggest that " the degree of aggressiveness exhibited by girls has been underestimated in prior studies, largely because forms of aggression relevant to girls' peer groups have not been assessed" (p. 719).

The work of Bjorkqvist and his colleagues in Finland is helpful, since his group has contributed significantly to understanding girls' aggression within a broader definition. Their bias suggests that violence not only reflects an act, but an intention as well. The focus on *physical* aggression may be seen as a male perspective, while female aggression reflects *indirect* aggressive tendencies focused on disruption of relationships. In this context, "instigators who manipulate others to attack the victim or, by other means, make use of social structures in order to harm another person," are seen as acting in aggressive ways (Bjorkqvist & Niemla, 1992; Bjorkqvist, Osterman, & Kaukiainen, 1992).

What is the wisdom of including a review of indirect aggression, a behavior more typical of female than male behavior? Is indirect aggression relevant in a review of adolescent girls' violence and understanding charge rates for violent offending?

The review to follow will summarize the literature on violence with girls that will include a review of the literature on *indirect* expressions of aggression. While data is yet to be provided that clearly draws the parallels between direct and indirect expressions of aggression - with the likelihood of chargeable violent behaviors arising - there are many parallels in the *nature* of the disorders. Within the context of a social learning perspective that currently best fits the predictors of criminogenic risk (Andrews & Bonta, 1998), there appear many consistencies between the literature on girls development of indirect aggression and the traditional definition of aggression as an overt manifestation. Sommers and Baskin (1994, p. 483) suggest that "the general orientation to risk with violence across gender reflects the convergence of social learning, control, and ecological theories that help explain weak school attachments and parental supervision, associations with delinquent peers, as well as other social and economic processes (e.g., relative deprivation, increased opportunities for illegal activities, and decrease in conventional role models)".

Summary

Principal findings from this overview of the prevalence and incidence rates for adolescent girl's aggression suggests the following:

1) The rate for violent offenses with girls in Canada has increased at twice the rate when compared to adolescent boys over the past decade.
2) Canada joins the U.S. and Great Britain in reporting increasing rates of violence with adolescent girls, though adolescent boys continue to account for the vast majority of physical aggression in all cultures.
3) Changing definitions of what constitutes aggression and biases in the juvenile justice system influence the reporting rates of aggression with girls.
4) When indirect aggression as a definition is included to define violence, girls tend to show a higher frequency of endorsement than do boys who demonstrate higher rates of overt aggression at all ages.

AGGRESSION AND GIRLS UNDER THE AGE OF 12: CONCEPTUAL ISSUES

For girls under the age of twelve, a predominant theme found in the literature supports the understanding furthered by Bjorkqvist et al. (1992) that indirect or social aggression is the primary means by which girls express aggressive tendencies. In contrast, boys are more likely to use physical or overt forms of aggression. The commonality across genders is reflected in the suggestion by Cowan and Underwood (1995) that if aggression is designed to inflict harm upon a victim, than social aggression achieves this end equally as well as does physical aggression. In this study, girls perceived social aggression as being no less harmful than physical aggression. Similarly, Crick, Bigbee and Howes (1996) reported that relational insults and verbal threats were the most frequently cited harmful behaviors for girls, whereas physical aggression and verbal insults were most frequently cited as being harmful by boys. In their conclusion, Crick et al. noted "... children view relational manipulative acts as angry, harmful behaviors" (p. 1003).

Age of Onset and Developmental Stability of Aggression in Girls

What is the relationship between childhood aggression and involvement in adolescent violence?

There is considerable evidence that conduct disorder (CD), including some forms of violence, is an extremely stable construct from childhood to adolescence and even into adulthood (Henggeler, 1989). Hawkins, Herrenkohl, Farrington, Brewer, Catalano and Harachi's (1998) review of the youth violence literature suggests that those youths who engage in violence at an early age are more prone to remain violent in later adolescence and into early adult years. In one longitudinal study reported by Farrington (1995), half the boys who were violent at 10 years of age continued to be violent at 16, contrasted with 8 per cent of the girls who remained violent. However, with a few exceptions, the majority of reviews on youth violence examining the stability of aggression and gender included a definition of female aggression that was restricted to overt aggression only and did not include social, relational or indirect forms of aggression. The importance of including a broader definition would appear obvious. If girls under the age of twelve show tendencies to use relational forms of aggression to resolve conflict, might they also

tend to either continue to use relational aggression or even develop a style of overt aggression in resolving conflict in adolescence? There are several studies that have addressed this aspect of female aggression.

Studies considering relational aggression with girls report several common themes in looking at stability. Teacher ratings of social aggression with girls appears consistent from ten years to thirteen years of age with a shift for girls utilizing more indirect forms of aggression as they enter adolescence (Stattin & Magnusson, 1989; Pulkkinen, 1992). Schlossman and Cairns (1993) suggest that this change might accompany an increased ability to process more complex social relationships reflecting an increasing social intelligence. Bjorkqvist's (1994) longitudinal data suggest that age 11 reflects a drastic shift in how girls begin to relate to others, beginning to draw on an increasing social understanding with respect to conscious manipulation and undermining of others through social relationships.

Talbott (1997) has also indicated that to the age of 11, girls and boys report similar incidence rates of physical aggression. At 11, Talbott suggests the majority of girls who were overtly aggressive, become more relationally aggressive - characterized through gossiping and spreading rumors. The one group of girls Talbott reports who continued to be physically aggressive were characterized as "having poor social cognitive awareness and unable to keep up with the complex exchanges in the social group". They were seen as more inclined to lash out physically in order to attain higher status and control. Consistent with this finding, Henington et al. (1998) suggested that any assessment procedure identifying girls at risk for violence should include relational aggression within the measure in order to reflect the possibilities for early intervention to reduce the likelihood of relationally aggressive girls becoming overtly aggressive in adolescence.

In one of the few longitudinal studies looking at the follow-up of childhood aggression in girls, Underwood, Kupersmidt, and Coie (1996) reported the level of on-going risk for girls judged to be aggressive by their peers. In this ten year follow up, 50% had become teen mothers compared to the base rate of 26% in the overall sample. In the view of these authors, childhood aggression with girls as young as 9 years of age, was a pre-condition for a variety of at-risk behaviors that could be classed together as reflecting peer rejection, rejection of social norms and involvement in risky behaviors compared to their nonaggressive classmates.

Finally, within the age of onset and stability literature on aggression with young girls, are the studies that identify the potential of aggressive girls developing disorders other than violent/ antisocial personality disorders in later years. While much of this literature will be covered under the section on comorbidity of violence and mental health disorders, it should be noted that childhood onset of aggression - when relational aggression is considered within that definition - has also been associated with the onset of psychiatric distress (i.e., depression, suicide) and somatization with women in later years (Zoccolillo, 1993; Pajer, 1998). The rates for later onset of these disorders range from 10 to 40 per cent.

A number of studies have identified factors that either correspond or predict childhood aggression in girls. Since many of these variables are consistent with the factors identified in the social psychology of criminogenic risk with young offenders (Andrews, Leschied & Hoge, 1992), their presentation will follow under the broad headings of the primary systemic influences of childhood adjustment - family, peers and school - and cognitions. In addition, there appears to be unique contributions to the understanding of girls' aggression through consideration of the effects of specific trauma. This section concludes with a presentation of factors that may accompany aggression in girls as well as a discussion of the gender paradox, relating the frequency of a disorder to the potential of its strength as a predictor of aggression and general CD with girls.

Systemic Influences Related to Childhood Aggression in Girls

In understanding childhood adjustment, Henggeler (1989), amongst others, has underscored the importance of viewing children in their social context. This systemic perspective views social interactions as holding the possibility for sustaining or promoting conduct disorder in children. Systemic influences are seen as those interactions children experience that can serve as a modeling effect for developing certain behaviors or creating opportunities for differential reinforcement promoting some behaviors over others. In the childhood maltreatment literature, systems influences have been tied to the development not only of conduct disorder but violent behavior as well.

General Socializing Factors. While the literature on prediction of risk for aggression and general conduct disorder strongly supports socialization as an integral aspect of prediction for risk (Andrews et al., 1992) the differential incidence rates and socialization contrasts for boys and girls is critical in understanding differing epidemiological features of aggression. Crick and Dodge (1994) suggest that boys are more instrumentally oriented (i.e., power-oriented, outwardly aggressive, controlling of external events) while girls tend to be more interpersonally oriented. Hence aggression in girls, particularly prior to adolescence, is characterized as being focused on disrupting interpersonal relationships as opposed to boys who are more overtly aggressive. Gagne and Lavoie (1993) cite jealousy and the need for revenge as contributing causes to inter gender violence with girls as compared to boys where drugs, alcohol, behavior problems and tendencies to be dominant play a primary role. Simply put, Eron (1992), in relating such findings to the differential prediction of aggression between the genders suggests that "over and above genetic, constitutional or biological predispositions that may underlie observed differences between females and males in aggressive behavior, there is something in the way we socialize males and females in our society that contributes in an important way to the differential incidence of antisocial aggression in these two groups of human beings" (p. 59). Such socializing differences are reflected not only in the emphasis given to the differing systemic influences regarding boys and girls, but is also in a cognitively-based theoretical view of girls' aggressive tendencies. This theoretical view, reflected in the work by Nicki Crick, Ken Dodge and others, will be discussed under the role of cognitions in describing aggression in girls.

Family Factors. Families play an important role in the socialization of children that is reflected in the literature with youth at risk. Consistently, factors within the family that contribute to promoting understanding regarding criminogenic risk with youth include communication styles, parent management approaches, monitoring of youth's whereabouts, consistency in behavioral expectations and violence within the home (Seydlitz & Jenkins, 1998). Some of these factors have also been identified in the violence literature with girls, though in some cases, the relationship is not as consistent as identified in the literature with boys.

Weak parent-child attachment has been identified as an important factor to be considered with aggressive girls. In a path analysis, Brook, Whiteman, and Finch (1993) found not only that

weak attachments were characteristic of the families of aggressive girls, but, once again, the relationship was bi-directional. That is, the strength within family was weakened as a result of girls' aggression. Viale-Val and Sylvester (1993) found that the effects of coming from separated families was even greater for girls than it was for boys as reflected in higher rates of aggression. Garnefski and Okma (1996) reported the home-based risk factors for girls consisted of 'negative' feelings of home, serious conflicts with parents and regular quarrels with parents

Aggression within the home also plays an important role in promoting aggression with girls. This aggression takes two forms. The first is reflected in the rate of verbal aggression expressed between parents and their daughters. Vissing, Strauss, Gelles, and Harrop (1991) and Garnefski and Okma (1996) noted that aggressive girls tended to come from homes characterized with high levels of verbal aggression. In addition, high levels of verbal aggression was found to be more positively related to aggression in girls than in boys.

The second form of aggression influencing violence rates with girls reflects the effects of exposure to family violence. Several noteworthy studies have identified the differential effects by gender of the impact of family violence on children. For example, Rosenbaum (1989) noted the incidence rate of family violence in the lives of runaway girls, while Curtis (1991) reported the low scores on self-concept for girls coming from violent homes.

While research on the effects of family violence on boys suggests that exposure to violence tends to promote aggression (Jaffe, Wolfe, Wilson & Zak, 1985) the data with respect to girls seems mixed. Kruttschnitt (1996) noted that girls exposed to family violence reported higher rates of depression than boys. O'Keefe (1994) and Jouriles and Norwood (1995) both reported that the picture with girls was not as clear as that presented with boys. In these two separate studies, equal numbers of girls exposed to violence became withdrawn, while others demonstrated aggressive tendencies. O'Keefe found a slightly higher rate of aggression in girls who had both witnessed family violence as well as being victimized physically by their mothers. It would appear that a combination of family factors that weaken primary attachments along with exposure to the negative effects of violence combine to promote distress in girls that can take the form of both social isolation as well as aggression. More study is necessary to further identify the individual differences in understanding girl's response to family-based violence.

Peer Influences. Peers can play a dual relationship in both the promotion and protection from violence among children and adolescents (Matthews, 1998). However, unlike boys who see popularity increase within a select peer group when they express violence, girls seem to be the recipients of rejection at the expression of their aggression (Messer & Gross, 1994). This relationship seemed to hold for girls who were expressing relational, as well as overt forms of aggression (Crick, 1996; Rhys & Baer, 1998).

While the results of expressed aggression for girls may be different than for boys, the victimization pattern may be quite similar. In a study reported by Matthews (1998), girls reported they were most likely to be victimized by another girl; boys reported that they were most likely to be victimized by another boy. Matthews concluded that the role of aggression amongst female peers may indeed be quite similar to that of males. That is, children and adolescents are aggressive with one another primarily for competition, status and dominance.

More recently, Woodward and Fergusson (1999) have reported data suggesting that girls reflecting high rates of early relationship problems continued to report behaviour problems into late adolescence. These later difficulties included criminal offending and aggression. Surprisingly, they did not include depression and anxiety which have been more frequently associated with adolescent girls long term difficulties and social relationships.

School Factors. While few in number, those studies linking school-based problems with aggression in boys report a similar pattern with girls. That is, aggression is reported higher for girls who have chronic school absence and higher dropout rates (Kupersmidt & Coie, 1990). Further, social rejection in school as a result of aggression was a predictor of girls' later aggressive tendencies, a pattern that was a somewhat stronger risk predictor for girls than for boys (Huesmann, Guerra, Zelli, & Miller, 1992). In general, a weak attachment to school from an early age appears to be a relevant factor in understanding girls' potential for aggression in later childhood and into adolescence.

Effects of Specific Trauma

Bowers (1990) suggests that stressful reactions to trauma can result in symptomatic reactions to precipitating events that can, while being antisocial and indeed aggressive

themselves, be viewed as reflecting survival/coping skills. Alfero (1981) reported that 20% of girls who later displayed aggressive behavior had been victimized through child abuse. In response to trauma, coping skills for children and adolescents such as running away can be viewed as functional yet placing the individual in additional risky, potentially re-victimizing situations. While escaping noxious situations (i.e., physically and sexually abusing situations) can precipitate behavioral sequelae that are risky, the experiences themselves may also have psychologically damaging consequences that can result in aggressive tendencies.

Artz and Reicken (1997) report that girls are five times more likely to be sexually victimized and twice as likely to be physically victimized when compared to boys. Dodge, Bates and Petitt (1990) indicate there at least two aspects of adjustment reactions to abusive situations for girls can occur. The first is that abused children may acquire "deviant patterns of processing information that may mediate the development of aggressive tendencies" (p. 1678). In their study on abused children, Dodge et al. (1990), after controlling for socio-economic status, single parenting and family violence, report a significant relationship between being abused and developing aggressive tendencies in later childhood and adolescence for girls. These authors also suggested that the results of victimization can lead to impaired relationship capacity in children that may be seen as social rejection/isolation that in turn has been identified as related to the development of aggressive tendencies with girls. Aspects of information processing theory and its relationship to aggression in children will be reviewed under the section under cognitions.

Cognitive Factors

In the general literature on criminogenic risk with adolescents, cognitions are given considerable importance in their prediction potential. In the review reported by Andrews et al. (1992) the correlation of cognitions and antisocial/aggressive behavior tends to be in the range of .35 to .40. In magnitude, these correlations tend to explain more of the variance in prediction than all other variables, including the important variables related to systemic influences. Granic and Butler (1998) for example, reporting on results from the Beliefs and Attitudes Scale, noted that aggressive adolescents endorsed more antisocial beliefs and higher scores on the anger subscale than nonaggressive adolescents. The conclusions of these authors was that there was

something about the cognitive appraisal of aggressive youths that mediated their experience and increased their likelihood to act in violent ways. Similar to the general crimogenic risk literature with youth, Vernberg, Jacobs and Hershberger (1999) girls use of overt aggression in early adolescence tended to be based on elevations in scales descriptive of the legitimacy of aggression as being warranted and the justification for aggression as it enhances power and esteem. The literature on aggression and girls has also emphasized a cognitively oriented theory of aggression that has bridged the effects of girls' interpersonal experiences and the relationship to the development of relational aggression, referred to as social information processing.

Social Information Processing Theory

The work of Crick and her associates (Crick, 1995; Crick & Dodge, 1996) has focused on relational aggression and the role played by social information processing theory. This theory emphasizes children's attributions about the intent of peers' behavior in social situations. Importantly, attributional biases of relationally aggressive girls was similar to that of overtly aggressive boys. This attributional style was characterized as children interpreting ambiguous relationships as "mean, intentionally motivated acts" (p. 319). However, there was also evidence in the study reported by Crick (1995) that girls who possessed both relational and overt aggression exhibited more hostile attributional styles when compared to girls who showed relational aggression only.

Comorbidity with Other Psychiatric Factors

In a departure from the literature on male CD and aggression where findings support cognitive and systemic variables reflecting the major links to childhood maladjustment, the childhood and adolescent CD and general aggression literature with girls reflects a somewhat different pattern when it comes to psychiatric comorbidity. Results from several studies suggest that girls show incidence rates of disorders such as depression, anxiety, adjustment disorders and separation anxiety disorders to a greater extent *when accompanied by* offenses of an aggressive type (Crick & Grotpeter 1995; 1996). Peterson, Zhang, Lucia, King, and Lewis (1996) and Juon and Ensminger (1997) identified higher rates of suicidal ideation in aggressive girls. Messer and

Gross (1994) identified elevations with aggressive girls on the Childhood Depression Inventory-depressive type - as compared to boys who endorsed more aggression-related items on the CDI. In tying the social exclusion hypothesis to aggression, these authors suggested that "... the social exclusion and active dislike characterizing peer rejection may be central to any mediational process underlying an aggression to depression pathway, possibly through effects on perceptions of self-competence or expressions of social reward" (p. 674). The tendency for girls to place greater value on social relationships may be one of the unique themes being played out in linking aggression and depression with girls.

Lastly of note with respect to comorbidity is the results of the Swiss study by Devaud, Jeannin, Narring, Ferron, and Michaud (1998) who found that an increased preoccupation with weight, problematic eating conduct, mood problems, suicidal conduct and image concerns with girls accompanied an increased expression of violence. Such expressions of aggression reported by adolescent girls may have been largely overlooked in understanding the component of aggression within this more traditional psychiatric presentation of adolescent girls.

The Gender Paradox

Additionally, a divergent theme for girls contrasted with boys' aggression is reflected in the importance given to the *gender paradox*. This paradox, as described by Loeber and Stouthamer-Loeber (1998), suggests that, "... in disorders with an unequal sex ratio, those with the lower prevalence rate tended to be more seriously affected." This finding will have particular relevance to policy makers and service providers. What it suggests is that the tendency to look simply at total numbers of presenting cases rather than being mindful of the *within group variability of prediction* for girls may have the effect of overlooking services for girls. Two examples are cited in support of the gender paradox.

The first is reported by Szatmari, Boyle and Offord (1989) who noted that the likelihood of girls identified with ADD developing CD is *forty times greater* than for boys. The second important example is reported by Loeber and Keenan (1994) who identified that the risk for girls with CD *who also demonstrate aggressive tendencies in childhood* developing additional disorders such as ADHD, anxiety disorders, depression, substance abuse disorders and

somatization was considerably greater for girls than for boys. The lesson of the gender paradox relative to a discussion of aggression in girls is considerable. Despite the fact of a much lower level of overall aggression demonstrated by girls compared to boys, due to the type of expression of aggressive tendencies and socialization experiences of girls, the extent of potential distress experienced by girls may indeed prove to be even greater than for boys.

Effects of Televised and Video Violence

While there is considerable evidence regarding the effects of televised violence in influencing aggression in children (e.g., see summary by Sege, 1998), the tendency has been for the literature to not differentiate the effects by gender. As a reminder, the general literature on the effects of violent television suggests children's viewing of violent television increases the risk of subsequent violence. But, the relationship may not be that simple nor straightforward. What also seems to come through in that work is the finding that certain types of children seem to develop a preference for violent content, and hence, there appears to be a reciprocal aspect to that relationship. Individual differences play a role in understanding the influence of exposure to violent content in the media.

The few studies on the effects of video violence on girls' behavior present a different pattern when contrasted with the effects for boys. Smith, Rodriquez, Thornton, Atkins and Nixon (1992) found that girls were simply not attracted to violent content in video programming to the same extent as boys when youths in grades 6 to 12 were asked for their attitudes regarding violent TV watching and violent video games. This finding seems, in part, to reflect a heightened sensitivity for girls regarding violent content that is expressed as rejection for increasing exposure. Aluja-Fabregat and Torrubia-Beltri (1998) found that girls rate the amount and intensity of violence in videos higher than boys with coincidentally lower levels of enjoyment in their viewing. It would appear from these findings that, what boys see as enjoyment and entertaining, girls see as being "just plain violent." It would seem, therefore, in the few studies available, that girls may not be influenced in the same manner and degree in developing a pattern of violent reactions as a result of exposure to media violence.

Summary

1) Literature on the effects of indirect aggression with children suggests that victims of relational and overt aggression report similar levels of distress.
2) Similar to physical aggression, relational aggression in girls is a considerably stable construct over time.
3) There are differential effects of families and peers on the development of aggression in girls compared to boys, in part reflecting the greater awareness girls have about the importance of social relationships.
4) Girls' responses to the effects of physical and sexual abuse have been shown to be related to aggression, in part understood as a means of self-protection.
5) Social information processing theory has been used to describe the thought processes with girls who develop justifications for use of aggression. In part, this cognitive style with girls is a product of a variety of socializing experiences.
6) Unlike boys who express higher rates of aggression, girls tend to report higher rates of comorbidity with their aggressive tendencies that includes depression, suicidal ideation and anxiety.
7) The gender paradox with girls is an important concept in understanding risk with aggression and girls. This paradox suggests that girls may have a greater likelihood of developing a multiple disorder, even though they may have, much lower prevalence rates of a particular disorder.

The following section will provide an overview of the development of aggression with girls from the age of twelve to seventeen years. It will include a review of some of the more prominent epidemiologic studies, as well as studies examining correlates and predictors of direct and indirect aggression with girls.

Methodology

The review of the literature began with a literature search using the data bases of psychINFO, sociofile, and ERIC. Key words used in the search were combinations of terms such as aggression, aggressive, violence, violent, girls, females, adolescence, and youth. In an attempt to include unpublished studies, an e-mail was sent to a listserve for developmental psychologists requesting any studies that were unpublished or currently in progress in the area of girl aggression. The following related topics were excluded from the literature search: effect of witnessing violence, adolescents' perceptions of violence (as opposed to actual aggressive behaviour), and the effects of media and violence. In addition, a literature search was conducted using the names of prominent researchers in the area of girl aggression.

Studies were included in the review of the literature if they met the following criteria:

(a) Aggressive behaviours were examined among adolescent girls aged 12-17. A few studies were included with samples that extended beyond 12 and 17 years if the mean age or most of the sample was within that age range. In the case of longitudinal studies, only data during the time when girls met the age criteria were included.

(b) The data were reported separately for girls and boys. Only 11 studies were found which used all female samples (only 2 of these 11 studies used Canadian samples). Thus, additional information about aggressive girls had to be taken from studies that included both boys and girls. Studies were included if they reported an n for girls, as well as reporting any of the following statistics for girls: correlations, t-tests, regression coefficients, chi-squares, logistic regression, discriminant analysis, causal modelling, percentages. A few representative qualitative studies were also included.

(c) The studies were published in the English language.

(d) The publication date was 1991-1999. These dates were chosen because the review of the literature on gender differences in correlates of juvenile delinquency for the meta-analysis by Andrews and Simourd (1994) encompassed studies mainly from the 70's and 80's.

The literature search yielded a total of 175 articles. Of these 175 articles, 46 met the above criteria to be included in the literature review of empirical research studies on aggression in adolescent girls. Eight categories were developed by three of the authors to group the variables present in these 46 studies:

(a) cognition (e.g., attitudes and beliefs, locus of control, empathy, fantasizing)

(b) peers (gangs)

(c) family (e.g., parenting style, attachment, family communication style, abuse)

(d) personality (e.g., conduct disorder, shyness)

(e) general aggression (physical, verbal, relational)

(f) substance abuse (alcohol, drugs, smoking)

(g) school (e.g., grades, completion of program, teacher attitudes)

(h) life events (e.g., suicide, pregnancy, homelessness)

Variables in the 46 studies were coded independently for these eight categories by three of the authors with an interrater agreement of 86%. Disagreements in coding were resolved through consensus discussion. After all variables were coded, the categories were further grouped into four larger groupings for the literature review: (a) general aggression, (b) cognitions, (c) systemic variables (family, peers, and school), and (d) self variables (substance abuse, personality, life events). Some of the studies have variables in more than one of these areas.

The intent of this organization of studies was to provide a framework in which to systematically examine adolescent girls' aggression and to be consistent with the general young offender literature on risk that uses a similar categorization. Furthermore, the objective coding of studies and our detailed report on the results (i.e., giving statistical values) lays the foundation for a future meta-analysis of this literature as more studies are added to our data base.

Types of Aggression by Adolescent Girls

It is not surprising that almost half of the studies in this literature review (20 of 46) examined various types and correlates of aggression (see Table 2). In summarizing the findings from these studies, it must be remembered that 18 of the 20 studies used samples that were a

combination of males and females. Thus, there is the potential that how aggression was conceptualized and assessed in these studies was more appropriate for boys and may not reflect accurately the types of aggression found in adolescent girls.

For the 20 studies, countries of origin included ten studies from the United States, four studies from Finland with two studies using the same sample, two studies from Australia, two from England and two studies from Canada. Fifteen of the studies used samples of elementary and high school students and five studies used samples of high-risk adolescents.

All of the studies assessed various forms of physical aggression. For example, three U.S. studies, using logistic regression, found that boys were involved in physical fights more than girls (Cotten et al., 1994; Hausman et al., 1994; Saner & Ellickson, 1996) and carried guns or a hidden weapon more than girls (Ellickson et al., 1997; Hausman et al., 1994). The two studies by Ellickson et al. (1997) and Saner and Ellickson (1996) used the same sample. In contrast, Finkelstein et al. (1994), using cluster analysis, found no gender differences in their 13-15 year old English students on four measures of self-reported verbal aggression, physical aggression, aggressive impulses, and aggressive inhibitory responses. As well, Nahulu et al. (1996) reported no gender differences in their U.S. Hawaiian sample on their aggression measure in relation to their measure of help-seeking strategies.

For general physical aggression, two Finnish studies examined peer-nominated aggression. In comparing four types of aggression identified by peers in their Grade 8 female classmates (Pakaslahti & Keltikangas-Jarvinen, 1997), arguing was reported significantly more often than fighting. At the high school level, peer-nominated aggression identified in girls aged 7-11 years correlated significantly with physical aggression in the same girls aged 15-17 years. (Viermero, 1996). However, a regression analysis to predict adolescent aggression from childhood aggression was not significant for females ($R^2 = .24$, $p = .06$). Similar correlations were found for a sample of Black female adolescents from Georgia housing projects (Durant et al., 1995) for frequency of weapon carrying with physical fighting, gang fighting, and with attacking someone with an intent to harm. Finally, in a sample of South Carolina high school girls (Valois et al., 1995), 38% of black students and 29.5% of white students had been in a physical fight in the previous 30 days.

Three studies also addressed physical aggression against a stranger. Langhinrichsen-Rohling and Neidig (1996) found in a sample of at-risk adolescents in a job corps residential program that having been victimized by a stranger predicted female violence perpetrated against a stranger, most likely in self-defence. In contrast, Chase found no significant relationship between use of physical aggression in current dating relationship and use of physical aggression with a nonfriend in a sample of high-risk, female adolescents in a drop-out prevention program (Chase et al., 1998). When race is considered, Valois et al. (1995) found that only 5.3% of their black high school girls and 3.2% of their white girls had fought with a stranger. Although different statistics were used in each of these studies, the associations are all small, making it possible to conclude that female physical aggression against strangers is not a common occurrence.

Table 2 Studies on Types of Aggression

Study/Country	Sample/Age	Violence Measure	Associated Variable	Statistic
Heaven (1994)/ Australia F = 146; M = 136	High school students; M = 14 years	Self-report of interpersonal violence	Self-report theft and vandalism	$r = .35$, $p < .01$
Durant et al. (1995)/ U.S. F = 126; M = 99	Black teens; M = 14 years	Weapon carrying	Physical fights Attack person in home Attack intent to harm Used weapon in theft	*rho* = .26 *rho* = .02 *rho* = .48 *rho* = .05
Langhinrichsen at al. (1995)/ U.S. F = 137; M = 337	At risk adolescents M = 18 years	Violence perpetrated against stranger	Victimized by stranger	$R^2 = .27$, $p < .001$
Valois et al. (1995)/ U.S. F = 2237; M =1900	High school students, 9th to 12th grade	Any physical fights Fight: stranger Fight: same sex friend Fight: opposite sex Fight: family member	blacks - 38% blacks - 5.3% blacks - 15.1% blacks - 5.1% blacks - 9.3%	whites - 29.5% whites - 3.2% whites - 8.4% whites - 3.5% whites - 11%

Table 2 continued

Study/Country	Sample/Age	Violence Measure	Associated Variable	Statistic
Viemero (1996)/ Finland F = 99; M = 88	High school students M = 16 years	Peer-nominated aggression Teacher-rated aggression	Physical aggression Self-rated criminality Teacher-rated aggression Self-rated criminality	r = .30 av, p <.01 r = .25 av, p <.01 r = .79, p <.01 r = .21, p <.05
Lindeman et al. (1997)/ Finland F = 425; M = 420 F = 406; M = 422 F = 476; M = 445	High school students 11 years 14 years 17 years	Verbal aggression from Social Problems Questionnaire	14-yr old girls used more verbal aggression than 17-yr old girls. girls used less than boys	MANOVA F(1,899) = 56.33, p <.01
Chase et al. (1998)/ U.S. F = 34; M = 61	Hi-risk adolescents M = 17 years	Physical aggression in current dating relationship (Conflict Tactics Scale)	Physical aggression with ex-partner with friend with nonfriend	 *phi* = -.03, ns *phi* = .07, ns *phi* = -.15, ns
Pakaslahti & Keltikangas-Jarvinen (1998)/ Finland F = 408; M = 431	Grade 8 students M = 14 years	Peer-nominated fighting, arguing, bullying, indirect aggression	Girls arguing >fighting Girls indirect > fighting Girls indirect > bullying Girls indirect > arguing	t = 3.89, p <.01 t = 10.24, p <.01 t = 9.36, p <.01 t = 9.56, p <.01
Paikoff et al. (1991)/ U.S. F = 72	Private schools M = 12	Aggression Scale	Delinquency Scale	r = .59, p <.01
Owens & MacMullin (1995)/ Australia F = 149; M = 165	Students M = 12, 14.7, 16.6	Aggression Scales - peer nomination	Girls verbal aggression in gd 9 > gd 6 or 11 Girls indirect aggres. in gd 11 > gd 6 Boys physical aggres. > girls all grades Boys verbal aggression > girls grade 6, 11 Girls indirect aggres. > boys grade 9,11	F(3,198) = 13.89, p <.01 F(3,198) = 15.54, p <.01 F(1,102) = 47.74, p <.01 F(1,97) = 16.34, p <.01 F(1,97) = 23.21, p <.01

Table 2 continued

Study/Country	Sample/Age	Violence Measure	Associated Variable	Statistic
Eley et al. (1999)/ England F = 408; M = 384	Child Twins Ages 8-16 yr	Parents' ratings on: Aggressive Behavior Scale Delinquency Scale Agressive Behavior	 Identical female twins Fraternal female Identical female twins Fraternal female twins Delinquency (all girls)	 $r = .77, p < .01$ $r = .44, p < .01$ $r = .75, p < .01$ $r = .57, p < .01$ $r = .55, p < .01$
Bjorkqvist, at al. (1992)/ Finland F = 63; M = 64	Grade nine students M = 15 years	Indirect aggression Physical aggression Verbal aggression Withdrawal	Girls higher than boys Boys higher than girls No gender difference Girls higher than boys	Discriminant analysis
Hausman et al. (1994)/ U. S. F = 201; M = 203	Telephone survey 13-19 years	Experiencing threats Experiencing fights Carrying guns	Gender Gender Gender	Boys > girls (p =.004) Boys > girls (p =.008) 13% boys, 4% girls
Finkelstein et al. (1994)/ England F = 40; M = 30	School students 13-15 years	Verbal aggression Physical aggression Aggressive impulses Aggressive inhibitory response	No gender differences on any measure	Cluster analysis
Cotten et al. (1994)/ U.S. F = 214; M = 222	Students M = 12.5 years	Physical fights, school	Gender	26% of girls 47% of boys
Saner & Ellickson (1996)/ U.S. F = 2476; M = 2110	Grade 12 students	Violent Activity	Gender	Boys 1.6 times more likely use violence
Artz (1998)/ Canada F = 6	Identified violent by service helpers M = 14.5	Reasons given for fighting	Responsibility for violence attributed to victim, necessary to put victim in place	Qualitative interviews

Table 2 continued

Study/Country	Sample/Age	Violence Measure	Associated Variable	Statistic
Ellickson et al. (1997)/ U.S. F = 2474; M = 2112	Students compared in grades 7 and 12 17-18 year old	Self-report: Gang fighting Carrying a weapon Attacking someone	Boys-13%, girls-3% Boys-21%, girls-4% Boys-19%, girls-8%	On all three: *t*-test, $p < .0001$
Nahulu et al. (1996)/ U.S. F = 941; M = 749	High school students Grades 9-12	Aggressiveness Scale	Gender	No differences
Howell et al. (1997)/ Canada F = 29; M = 86	Admission for psychiatric assessment 12-18 years	High Risk Situations Questionnaire	Gender Type of crime	No main effect for gender nor type of crime by gender interaction

Notes: F = female sample size; M = male sample size

Only two studies dealt with the relationship between violence in adolescent girls and theft/vandalism. Heaven (1994) reported a significant relationship between self-reported interpersonal violence and self-reported theft/vandalism for his Australian high school girls. However, carrying a weapon and using a weapon when committing a theft were not significantly related for the Black females in the Durant et al. (1995) study. When aggression was related to delinquency in a sample of affluent girls in New York private schools (Paikoff et al., 1991), a high correlation of .59 ($p < .01$) resulted. However, this high correlation may be due to aggression and delinquency being assessed by two scales with overlapping items from the same instrument (Youth Behavior Profile). Findings from these few studies appear to indicate that there may be a relationship between aggression in girls and other antisocial behaviour. Certainly, more studies are needed on this connection before definitive conclusions can be reached.

Three Finnish studies and one Australian study (Owens & MacMullin, 1995) were the only ones to include measures of nonphysical aggression which many authors (e.g., Bjorkqvist, Osterman & Kaukiainen, 1992; Crick & Dodge, 1994; Loeber & Stouthamer-Loeber, 1998; Statin, 1989) view as being more typical of female adolescent aggression. For example, Owens and MacMullin (1995) found that grade 9 girls (age 14) were rated by their peers as using more verbal aggression (e.g., yelling, name calling) than grade 11 girls. Additionally, grade 11 girls

were rated by their peers as using more indirect aggression (e.g., gossiping, ignoring) than grade 6 girls. Finally, indirect aggression was higher for girls than for boys in grade 9 ($F(1,102) = 8.72, p < .01$) and grade 11.

Similarly, Lindeman et al. (1997) found that 14 - year old girls were reported by their peers as using more verbal aggression than 17-year old girls. However, in both studies the girls used less verbal aggression than did the boys. Using the same sample, Pakaslahti and Keltikangas-Jarvinen (1998) found that intriguing (indirect verbal aggression) was identified in female peers more often than fighting, bullying, and arguing, whereas boys were reported as using bullying significantly more than the other three forms of aggression. In another study addressing gender differences, Bjorkqvist, Lagerspetz, and Kaukianen (1992) found through stepwise discriminant analysis of items on their aggression measure that indirect aggression items (e.g., backbiting, spreading vicious rumours) were more typical of females, while physical aggression items (e.g., tripping, kicking) were more typical of males.

It is interesting that two studies from two different continents found that 14 - year old girls were rated higher for verbal aggression by their peers than were older girls. It may be that girls deal with the strains and stresses of the transition period into adolescence by being more verbally aggressive with each other as they work to understand how relationships change in the teen years. It is also interesting that two studies found gender differences with females using indirect aggression more than males. Again, more studies are needed on both of these variables to determine if these trends are widespread.

One of the strongest associations with aggression was found by Viemero (1996) in the relationship between peer-nominated aggression and teacher-rated aggression $r = .79$. Student participants named all of the female students in their class who used 10 aggressive behaviours, while teachers rated verbal and physical aggression of female students on a 5-point scale. This high correlation indicates that these teachers and students had a high level of agreement about which girls were aggressive and may indicate that it would be possible for other teachers and students to identify and predict accurately which girls will have difficulty with aggression in the future.

In a very different vein, is a British twin study (Eley, Lichtenstein, & Stevenson, 1999) in which parents of 501 twin pairs completed the Aggression (e.g., fighting, threatening) and Delinquency (nonaggressive antisocial behaviour, e.g., lying, cheating, stealing) subscales from the Child Behaviour Checklist (Achenbach, 1991). This study was included in this review even though the age range was 8-16 years because the researchers began with 13-year old twins from a British Register for Twins and then recruited additional families from twins clubs. No mean age was reported for the study. This sample had low aggression scores with means on the two aggression scales being lower for both boys and girls than means reported for American children in the test manual. Within-pair correlations on Aggression scores resulted in .77 for identical female twins, .44 for fraternal female twins, and .27 for opposite sex twins. Male data was similar on this scale which indicates the presence of some genetic effects for aggression scores because of the higher correlation between identical twins.

The data were different for nonaggressive antisocial behaviour (Delinquency subscale). While the female correlational pattern was similar to the Aggression scale (.75 identical twins, .57 fraternal twins, and .32 opposite sex twins), for males there was no difference between the correlations for the two types of twins (.65 identical twins, .66 fraternal twins). In addition, the correlation between aggressive and nonaggressive antisocial behaviour was .55 for females (Eley et al., 1999). These high correlations and more similar values for both types of twins in both sexes suggest shared environmental influences for nonaggressive antisocial behaviour. However, the larger difference between the correlations of the two types of female twins compared to the boys suggests that genetic factors play a greater role in nonaggressive antisocial behaviour for girls. The lower correlations in the opposite-sex pairs also imply sex differences in the etiology of both types of antisocial behaviour. While there may be a genetic factor in both aggressive and nonaggressive antisocial behaviour for girls, Paikoff et al. (1991) found no relationship between hormonal status and aggressive behaviour in their sample of 10-14 year old girls.

One of the limitations of quantitative research designs is that they are less able to address the complexity of what a particular behaviour means for people. One of the limitations of qualitative designs is that the findings are not generalizable to the relevant population. With this caveat in mind, a qualitative study with a Canadian sample (Artz, 1998) presents some insightful

information about six girls who used physical aggression rather than indirect aggression. Artz did in-depth interviews with six girls (13-16 years) who had been identified by school and agency counsellors, classmates, and themselves as being in violent fights. What was most interesting about this study were the reasons given by the girls for fighting other girls. First, the fights that they were involved in were not spontaneous eruptions of rage or anger, but were prearranged for entertainment value for an audience. In particular, it was important that boys be in the audience because the girls felt more equal to boys when they fought and believed that watching girls fight was exciting and sexually stimulating for boys. Second, the victims for the fight were chosen because they needed to be taught a lesson, they were acting cocky instead of subordinate, they were after another girl's boyfriend, or they were perceived as being "sluts." Third, the violent girls blamed their victims for the fights by believing that their victim deserved the punishment they received because of their bad behaviour.

Artz (1998) interprets these findings as first being a repetition of their parents' ways of justifying their punishment/violent behaviour with their children (all six girls came from violent homes). Second, Artz believes that these girls had internalized societal messages that demean girls. As with any oppressed group, the feelings of self-hatred are turned onto members of the same group so that they control each other in a way that also attracts attention from the dominant group of boys. Therefore, she asserts that sexual inequality had a major role in the violence perpetrated by these adolescent girls.

The value of this study is that it suggests directions for future research that are geared specifically to the experiences of girls, rather than trying to assess female adolescent violence through the lens of male adolescent violence. For example, Matthews (1998) asserted that aggression in girls had the same goals of competition, status, and dominance as was present in boys' violence. While these goals may be present in girls' aggression, Artz's (1998) data, as well as the few studies that included indirect aggression, suggest that aggression in girls has an additional goal of relational influence.

What can be concluded about types of aggression in adolescent girls from these few studies? When adolescent girls are compared to adolescent boys, the majority of studies show that girls are in fewer physical fights than boys (Cotten et al., 1994; Hausman et al., 1994; Saner & Ellickson, 1996) and do not carry weapons as often as boys (Ellickson et al., 1997; Hausman et al., 1994). The two studies which found no gender differences in types of aggression (Finkelstein et al., 1994; Nahulu et al., 1996) were from England and Hawaii, respectively, whose samples may have been sufficiently different from the North American context to yield different results. Adolescent girls also appear to use indirect, or relational aggression more than physical aggression, especially when compared to boys (Bjorkqvist, Lagerspetz, & Kaukianen, 1992; Owens & MacMullin, 1995; Pakaslanhti & Keltikangas-Jarvinen, 1998). This finding is consistent with the research on younger girls (Bjorkqvist, 1994; Pulkkinen, 1992; Stattin & Magnusson, 1989; Talbott, 1997) finding a shift to more indirect forms of aggression at the beginning of adolescence. Finally, while the following literature review will identify many environmental variables that are related to aggression in adolescent girls, the recent study of twins (Eley et al., 1999) indicates that there may also be a genetic component to aggression in both boys and girls. This finding means that early intervention is particularly important for these children to counter the impact of a potential genetic predisposition to aggression.

Cognitive Variables Associated with Aggression in Adolescent Girls

Despite the emphasis given to the theoretical context of social information processing and aggression in studies with girls under the age of 12 years, there appears not to be a similar emphasis in the adolescent literature on the association of cognitive variables with aggression. Of the 46 studies identified, only 7 studies included a measure of cognitions in investigations on aggression and adolescent girls (see Table 3).

Two of the studies were from Finland, though by different research teams using different samples in that country (Osterman, Bjorkqvist, Lagerspetz, Charpentier, Caprara, & Pastorelli, 1999; Pakaslahti & Keltikangas-Jarvinen, 1997) and three were from the United States (Chase et al., 1998; Giancola, Mezzich & Tarter, 1998; Carlo, Raffaelli, Laible & Meyer, 1999). Five studies used normal cohort samples of youths of high school age, one study used a drug treatment group as a comparison, and one study used subjects who were involved in a behavioural program.

In all studies, females were compared to males on a variety of measures assessing cognitions. These included standard measures for problem solving-strategies, locus of control, and measures of justification and legitimization for the use of aggression. These measures were then correlated to measures of self-reported aggression and past violent behavior. For this purpose, measures included the Conflict Tactics Scale, specific aggression scales from the Weinberger Adjustment Inventory, and the Youth Health Risk Survey as well as individual items related to aggression generated by the authors. While the majority of these studies used traditional definitions of aggression as an overt act, Osterman et al. (1999) employed a measure developed by Bjorqvist that assessed indirect aggression. No studies included official reporting of violent criminal involvement.

The nature of the victims in these studies ranged from strangers, in one study, to intimate dating partners. The types of aggression assessed in these various contexts ranged from physical fighting to verbal aggression. Results were reported separately for each type of aggression used (e.g. physical assault, verbal aggression) and the measure of cognitions employed.

The weakest correlations were noted in studies using general measures of cognitive processing such as the Locus of Control Scale as reported by Osterman et al. (1999), and the cognitive scales from the Antisocial Behavior Questionnaire, and the Kiddie-Schedule for Affective Disorders (Giancarlo, et al. , 1998). Stronger findings were noted on measures that asked more specific questions about the nature of thinking related to perpetration. Carlo et al. found significant correlations between the suppression of aggression and victim empathy (r=.56), perspective taking (r=.30), and combined cognitive scales related to positive adjustment, e.g., rational thinking (r=.49).

In addition, one study (Chase, Treboux, O'Leary & Strassburg, 1998) looked at the justification and legitimization for use of aggression by adolescent girls *in the specific context* of the nature of the relationship of the respondent to the victim. This type of study is similar to questions asked from measures in the field of general criminogenic assessment of risk such as developed by Simourd (1994) and Butler and Leschied (1997). Measures of this nature tend to ask questions related to specific contexts when a respondent may deem it contextually *"appropriate"*, to use physical force in order to bring about a desired end. These contexts can range from self-protection to establishing control over others in a social situation. In the study

reported by Chase et al. (1998), the justified use of force by adolescent girls was strongest when confronted with conflict involving a nonfriend (r=.50), followed by the justified use of force with a friend (r=.38). Nonsignificant correlations were found between justification of force and those areas of more intimate relationships between the respondents and others such as in past or current dating relationships.

The balance of findings that were within at least a moderate range of significance, were those on empathy and perspective taking reported by Chase et al. (1998). Both separately and in combination, measures of empathy and perspective taking were positively related to self-report ratings on the suppression of aggression. In other words, the ability to perceive the effects of victimization would appear to be related to an ability to suppress violent acts.

There are relatively few studies using a measure of cognitions to look at potential associations with individual or contextual factors and the expression of violence by adolescent girls. This gap is an obvious area for further development exploration. In the previously reviewed aggression literature with younger girls, as well as the general youth literature on criminogenic risk, cognitions are given considerable importance in developing an etiology of violence and youth. Indeed, it is due to this development in the assessment literature with youth at risk that so much progress has been made on the treatment and prevention side of conduct disorder and aggression, and effective service (Hollin, 1990).

Table 3 Studies on Cognitions and Aggression

Study/ Country	Sample/ Age	Violence Measure	Associated Variable	Statistic
Osterman et al. (1999)/ Finland F=358; M=364	International-European Ages = 11 and 15 years	Aggression Scale: Physical aggression Verbal aggression Indirect aggression	Locus of Control	 r=.06, ns r=.02, ns r=.09, ns
Carlo at al. (1999)/ U.S. F= 46; M=43	Elementary and High School M= 16 years	Self Report of Aggression	Empathy Perspective Taking Combined Scales	r=.56, p<.001 r=.30, p<.001 r=.49, p<.001
Chase et al. (1998)/ U.S. F=34; M=61	Prevention Program M= 17 years	Self Report; Justification of Agression	current dating relationship prior date relationship with a friend with a non-friend with an ex partner current dating rel.	r=.28, ns r=.26, ns r=.38, p<.05 r=.50, p<.001 r=.07, ns r=.07, ns
Pakaslhati & Keltikangas (1997)/ Finland F= 383; M=398	High School Students M= 14	Aggressive Behavior Aggressive strategies	Relativism Absolutism Legitimization Morality Relativism Absolutism Legitimization Morality	r=-.06, ns r=-.08, ns r=.08, ns r=.60, p<.001 r=.13, p<.05 r=.26, p<.001 r=.03, ns r=.29, p<.001
Giancarlo et al. (1998)/ U.S. F = 283	Substance and nonabusing youth M=16 years	Self Report Questionnaires	current disruptive lifetime disruptive current delinquent lifetime delinquent current agg. behavior lifetime agg. behavior	r=.03, ns r=.04, ns r=.01, ns r=.06, ns r=.02, ns r=.10, ns
Huasman et al. (1994)/ U.S. F=201, M=199	Inner-city girls; Age Range 13-19	Survey about violence; assessed responses to conflict situations	witnessed violence carry guns threatened ever in physical fight	69% 4% 30% 23%
Cotten et al. (1994)/ U.S. F=214, M=222	High school	Self-report scale; Youth Health Risk Survey	linear regression of aggression & gender past physical fighting school suspension for fighting girls less school fight	reg. coeff. 95%CI -.01 -.67, .64 26% 21% Odds Ratio 95%CI .44 .29,.68

Notes: F = female sample size; M = male sample size

Two studies focused on general aggression patterns and cognitions with adolescent girls. Cotten et al. (1994) used multiple linear regression and logistic regression procedures to examine general aggression scores and cognitions with males and females. Aggression scores from a self-report scale were correlated with a number of variables measuring students' perceptions of family attitudes towards violence. While mean male scores on aggression overall were higher than were the scores reported with females, the relationship between aggression and attitudes of family members supportive of violence were similar across gender. For adolescent girls, correlations were reported in the magnitude of $r = .42$ ($p < .001$) for committal of aggressive acts and students' attitudes towards violence, and $r = .22$ ($p < .001$) for the perception of their parents' supportive attitudes toward violence and committal of aggressive acts.

In a study reported by Hausman et al. (1994), attitudes were ranked on the basis of responses to 21 items that reflected problem-solving strategies to conflict, the degree to which violence was preventable and awareness to the risk of weapons. Noteworthy, in this study that focused on inner city youth, females reported a *higher rate* of exposure to violence than did males, though males reported a higher rate of being personally threatened by violence. Beyond this unique contribution, results from this study reported data using frequencies and percentages to describe endorsements given the variety of cognitions related to problem-solving situations. Adolescent girls who were not involved in fighting tended to view violence as preventable, reflecting the outcome of gossip and arguments.

For both of these studies, findings with cognitive variables were consistent with previous findings from the social psychological literature and criminogenic risk with youth Andrews and Bonta, 1998). That is, greater cognitive complexity, reflected in a problem solving orientation for avoiding conflict, was associated with lower rates of violence. Exposure to parental models who reported attitudes supportive of violence was consistent with higher rates of attitudes supportive of violence in the lives of the girls themselves.

Systemic Factors Associated with Aggression in Adolescent Girls

Family Factors. Numerous studies have demonstrated the importance of family processes and family dynamics in promoting and maintaining aggressive behaviours and attitudes (e.g., Farrington, 1992; Patterson et al., 1989; West & Farrington, 1973). Ten studies in this literature review examined the association between aggressive behaviour in adolescent girls and family variables, such as social learning, parenting style, and exposure to violence.

The studies were conducted world-wide with four studies from the United States, three from Finland, and one study each from Canada, England, and Australia. The majority of the investigations involved high-school students or high-risk adolescents. However, Pakaslahti et al. (1998) used parents as the unit of analysis in their study of differences between aggressive and nonaggressive adolescent girls. Eight of the ten studies involved comparisons of males and females with varying assessments of aggression.

Beginning with the family variable of communication styles, Heaven (1994) examined the relation between adolescents' perceptions of the quality of family communication style and their self-reported aggression. Using the 40-item Family of Origin Scale (Manley et al., 1990), family communication style was examined with respect to positive communication (e.g., encouraging child to express views), negative communication (e.g., "unpleasant atmosphere in family"), and acceptance of loss. Only negative communication correlated significantly, but weakly, with self-reported violence in females indicating that girls from families with more negative communication patterns tended to report higher levels of aggression.

The influential role of parents as models in adolescents' social learning was explored in several studies. Bjorkqvist and Osterman (1992) provided a comprehensive study of the influence of exposure to parental behaviour on adolescent aggression. Table 4 has a selection of correlations between adolescents' perceptions of parental behaviour when angry and their own aggression. Consistent with social learning theory, the findings show a strong relationship between parental behaviour and their children's aggressive behaviours. For example, females who witnessed verbal aggression by parents had higher levels of verbal aggression. The authors distinguished between two contexts: at home and with friends. Interestingly, across various types

of aggression, a stronger association was found between parental behaviour and aggression at home for females than was found for males.

Fathers' behaviour was more strongly related to daughters' aggressive behaviour than to sons' aggressive behaviour. In fact, further analyses indicated that some behaviours of fathers that were strong predictors of female aggression were significant negative predictors for males (e.g., hitting). In contrast, the behaviour of mothers was more strongly related to their sons' aggression than to their daughters' aggression. The authors argue that males may not be as influenced by their fathers because they distance themselves and, therefore, may not identify with the same-sex parent.

To further understand the role of parents in the socialization of aggression, Bjorkqvist and Osterman (1992) conducted structural equation analyses examining the interaction between parental behaviour, emotional relationship with parent, and aggressiveness. They found that a child's emotional relationship with a parent was the strongest single predictor of children's aggressiveness. However, it should be noted that the influence of mother's behaviour only included shouting and father's behaviour only included hitting and drinking alcohol.

Another aspect of parental behaviour, problem-solving strategies, was examined by Pakaslahti et al. (1998). Comparing aggressive and nonaggressive girls, the study examined group differences in the influence of mothers' and fathers' social problem-solving skills. Fathers of aggressive girls tended to produce less problem-solving strategies than fathers of nonaggressive girls. With respect to solving problems in interactions, mothers were the only parents to have a significant influence. Mothers of aggressive girls tended to be more indifferent, more reprimanding, and tended to discuss problems less with their daughters than mothers of nonaggressive girls.

The influence of parenting style on adolescents' aggression also was examined in three studies (Carlo et al., 1999; Saner & Ellickson, 1996; Viemero, 1996). Viemero (1996) found that girls who were rejected by their parents were more likely to be aggressive. Further, Carlo et al. (1999) found that the more supportive and involved parents were in their adolescents' lives (regardless of gender), the less likely their children would engage in physical aggression. In a similar vein, Saner and Ellickson (1996), in a longitudinal study of youth, report from a logistic

regression that low parental support and affection predicted persistent hitting and predatory violence in females. Although these variables were significantly related for both genders, the relationship between low parental support and violence was stronger for the adolescent girls. Lastly, disrupted family status was predictive of persistent hitting only for girls.

Table 4. Family Variables and Aggression

Study/Country	Sample/ Age	Violence Measure	Associated Variable	Statistic
Heaven (1994)/ Australia F= 146; M=136	High school students M = 14 years	Self-report of interpersonal violence	Family: Positive communication Negative communication Acceptance of loss	 r =-.11, ns r = .19, p <.05 r =-.12, ns
Langhinrichsen et al. (1995)/ U.S. F=137; M =337	At-risk adolescents M = 18 years	Conflict Tactics Scale: Perpetration against parents Perpetration against siblings Perpetration against friends	Victimization by parent	r =.36, p <.001 r =.15, ns r =.24, p <.01
Pakaslahti et al. (1998)/ Finland F= 58	Aggressive and nonaggressive girls & parents	Teacher ratings of aggression	# of problem-solving strategies of father Mother's use of indifference strategy Mother's use of reprimanding strategy Mother's use of discussion strategy	t =-1.93, p =.06 t = 1.90, p =.06 t = 2.07, p =.04 t = -2.15, p =.04
Viemero (1996)/ Finland F= 99; M= 88	High-school Age= 15-17 yrs.	Peer-nominated aggression	Parental punishment Parental rejection	r =.21, ns r =.42, p <.01
Wekerle & Wolfe (1998)/Canada F= 193; M= 128	High school M = 15 years	Questionnaire: Partner physical abuse Partner verbal abuse	History of child maltreatment	R^2 =.02, ns R^2 =.03, ns

Table 4 continued

Study/Country	Sample/ Age	Violence Measure	Associated Variable	Statistic
Watts & Ellis (1993)/ U.S. F= 670; M= 654	Elementary and high school Grades 7 - 12	Self-report: Threaten with gun grades 7-12) Threaten with gun (grades 7-8) Delinquency (grades 7-12) Delinquency (grades 7-8)	Self -report sex abuse	 r =.13, p <.01 r =.33, p <.01 r =.26, p <.01 r =.51, p <.01
Jasper et al. (1998)/ England F= 100	Social service placements Age= 11-17 yrs.	Reference in referral letter of violence	Compared abused and nonabused	χ^2 NS
Carlo et al. (1999)/ U.S. F=46; M = 43	High school M= 16 years	Suppression of aggression	Adolescents' perception of parental involvement	R^2 =.16, F change (1,86) = 18.7, p <.001
Bjorkqvist & Osterman (1992)/ Finland F= 85; M= 89	High school M= 13.6 years	Self-report: aggression aggression aggression at home agg. with friends aggression at home agg. with friends aggression aggression aggression at home agg. with friends agg. at home agg. with friends agg. at home agg. with friends aggression	Adolescent's perception of **Father's behaviour:** hitting drinking verbal aggression verbal aggression physical aggression physical aggression emotional relationship **Mother's behaviour:** shouting leaving house leaving house verbal aggression verbal aggression physical aggression physical aggression emotional relationship	 r =.26, p <.05 r =.29, p <.01 r =.56, p <.001 r =.35, p <.001 r =.69, p <.001 r =.18, p <.05 r =.36, p <.001 r =.26, p <.05 r =.42, p <.001 r =.25, p <.05 r =.45, p <.001 r =.28, p <.01 r =.38, p <.001 r =.01, ns r =.28, p <.01
Saner & Ellickson (1996)/ U.S. F = 2476; M =2110	High school Grade 12	Persistent hitting Predatory violence	Low parental support Disrupted family status Low parental support	OR = 2.1, p <.05 OR = 1.4, p <.05 OR = 1.7, p <.05

Notes: F = female sample size; M = male sample size

Several studies also examined the extent to which parental neglect and abuse affected the expression of aggression in adolescent girls. Langhinrichsen-Rohling and Neidig (1995) asked economically disadvantaged youth to complete surveys concerning their own history of victimization and the extent to which they are violent towards their parents, siblings, friends, or strangers. Victimization by parents was significantly associated with daughters' perpetration against parents and friends. From a stepwise multiple regression, 39% of the variance in girls' perpetration against parents was accounted for from the four predictors of sibling victimization, parent victimization, friend victimization, and witnessing parental aggression. However, the last variable was an inhibitor of perpetration as indicated by a negative Beta value.

Watts and Ellis (1993) focussed on another aspect of familial abuse, sexual molestation. A previous history of sexual abuse by a family member was highly correlated with delinquency, particularly, among the younger participants (see Table 4). Adolescent girls in grades 7-8 who had been sexually molested were also more likely than older females to report threatening someone with a gun. In contrast, Jasper, Smith, and Bailey (1998) found in their retrospective case analysis of 100 adolescent girls in a forensic mental health system that abused and nonabused girls had an equal rate of violence toward other people (68% and 69% of each group, respectively). Finally, Wekerle and Wolfe (1998) examined the impact of childhood maltreatment on girls' dating relationships in a high school sample. In contrast to males, a history of parental maltreatment did not predict female dating aggression.

These studies illustrate the importance of family factors in relation to aggression in adolescent girls. Both maternal and paternal verbal and physical aggression were significantly related to daughters' aggression at home and with peers (Bjorkqvist & Osterman, 1992). Negative communication styles by parents (Heaven, 1994; Pakaslahti et al., 1998), parental rejection (Viemero, 1996), or low parental support (Saner & Ellickson, 1996) were also related to adolescent girls' aggression. These findings confirm previous observations made among younger girls (Garnefski & Okma, 1996; Viale-Val & Sylvester, 1993; Vissing et al., 1991) and studies involving only males (Henggeler, 1989).

Surprisingly, the studies examining childhood neglect/abuse and aggression had mixed results. Two studies (Langhinrichsen-Rohling & Neidig, 1995; Watts & Ellis, 1996) found a significant relationship between the two variables, while two studies (Jasper et al., 1998; Wekerle & Wolfe, 1998) did not. Previous retrospective assessments in younger samples of childhood victimization and neglect (Weeks & Widom, 1998; Widom & White, 1997) have found that neglected males and females were at higher risk for arrests for violent crimes. Clearly more research is needed to clarify these mixed results with adolescent girls and to understand better the underlying processes explaining the relation between childhood maltreatment and later arrests for violent crimes.

Peer Factors. Four studies examined the relationship between peers and aggression in adolescent girls (see Table 5). As part of a larger longitudinal study examining biological and social-contextual factors on adolescent aggression, Caspi et al. (1993) assessed whether association with delinquent peers was related to aggression in girls. They found that females who had a history of aggressive behaviour were more likely to know delinquent peers than females without aggressive problems, $t(127) = 2.16$, $p < .05$. Similar to findings with males (Patterson, 1992), aggressive girls may continue to have behaviour problems because associating with delinquent peers provides more opportunities for engaging in delinquent behaviours.

Another aspect of peer influence on aggression is gang membership. Despite decades of research on male gangs there is little research on females' involvement in gangs. Three qualitative studies (Brotherton, 1996; Harris, 1994; Joe & Chesney-Lind, 1995) found through interviews that females joined gangs for many of the same reasons that males joined gangs: to escape economically disadvantaged homes, improve self-esteem, social cohesion, and identification. Harris (1994) reported that adolescent girls also joined gangs because of a need for revenge (e.g., sibling murdered, having been raped), protection, and to achieve a sense of family because they often came from violent and disrupted family environments. In addition, Joe and Chesney-Lind (1995) found that gangs provided protection and skills necessary for girls to defend themselves against violence in their families and neighbourhoods.

In contrast to traditional stereotypes, Harris (1994) observed that female gangs engaged in high levels of crime and delinquent behaviour. In fact, an ability and willingness to fight was

highly valued within these groups. Similar to their male counterparts, physical aggression was a primary form of social interaction and problem solving. However, based on their interviews of both male and female gang members, Joe and Chesney-Lind (1995) believe that female gang members are not as violent as male members. They hypothesize that the presence of females in male gangs might serve to suppress violence and delinquent behaviour. The authors also noted that female gang members were less likely to be involved in drug selling than the males in their sample. In contrast, Brotherton (1996) found that the female gangs in his sample were formed out of economic need with the primary goal being to capitalize on lucrative financial rewards from delinquent activities, such as drug trafficking and sale of stolen goods.

These four studies on the relationship between peers and aggression in adolescent girls are slightly different from studies with younger samples which mainly focussed on the gender of peer victimization. Developmental studies (Patterson, DeBarsyshe, & Ramsey, 1989) consistently show the increasing importance of peers during the adolescent years. For adolescents who do become involved in gangs, the influence of that specific peer group has paramount importance in determining the behaviour of the gang member. To a lesser degree, Caspi et al. (1993) also found that peers were associated with delinquent behaviour in other adolescents. All of the research on females in gangs that was found for this literature review was conducted in the United States. Much research needs to be done to determine the extent of female membership in Canadian gangs and to understand what leads some adolescent girls to choose gang membership. The implications for intervention will be very different if the causative factors are economic (poverty), as suggested by Brotherton (1996), family violence, or intrapsychic variables.

School Factors. Three studies addressed various school-related variables and female adolescent aggression. Two of these studies (Ellickson et al., 1997; Serbin, Cooperman, Peters, Lehoux, Stack, & Schwartzman, 1998) examined the relationship of violence or delinquency with dropping out of high school and low academic achievement. Both studies found significant relationships for violence with school dropout and low achievement. Adolescent girls who were more violent or exhibited norm-violating behaviours were more likely to drop out of high school and have lower academic achievement (see Table 5).

Having found an association between timing of menarche and delinquency, Caspi, Lyman, Moffitt, and Silva (1993) were interested in the extent to which the association was mediated by the gender composition of the school. They found that the relationship between menarcheal timing and delinquency was specific to girls attending mixed-sex schools. Early maturing girls (i.e., girls who entered puberty earlier than 12.5 years) in mixed-sex schools were more likely to engage in norm-violating behaviour than their counterparts in same-sex schools (see Table 5). The authors argue that early pubertal development is more likely to bring girls into contact with patterns of delinquent behaviour. Further, they contend that the school environment in mixed-sex settings provides more exposure and more opportunities to participate in norm-violating behaviour.

From these few studies, it appears that there may be aspects of the school environment that are connected to aggression in adolescent girls. As with younger girls (Kupersmidt & Coie, 1990), aggression in adolescent girls is associated with school dropout. What is particularly disturbing about the association of school dropout and low achievement with aggression in adolescent girls is that poor educational achievement is also associated with other problems. Serbin et al. (1998) found that lower educational attainment level in their Montreal sample of high risk girls predicted teen pregnancy, the teen mothers' problematic behaviour with their children, mothers' depression and anxiety, and behavioural problems in their children. In other words, education was a protective factor: aggressive girls who stayed in high school had more positive outcomes on all of the above variables. These findings highlight the importance of intervention with aggressive girls at the level of improving their school achievement and interactions with their peers so that they stay in school. It is likely that adolescent girls who drop out of school see few options for themselves other than motherhood.

Substance Use Variables Associated with Aggression

There were seven articles addressing issues relating substance use and aggression with adolescent girls. Three studies used clinical samples, two compared clinical samples with "normal" high school samples and one used a high school sample only. Two studies used

Table 5. Peer and School Variables Related to Aggression

Study/ Country	Sample/ Age	Violence Measure	Variable	Statistic
Brotherton (1996)/ U.S. F=46	Gang members Ages=15-22 years	Pathway to entering gangs Organizational structure of gangs Use of violence	Drug-dealing, other criminal activities	Qualitative interviews
Harris (1994)/ U.S. F=21	Gang members	Group norms of violence	Gang structure Activities	Qualitative interviews
Joe & Chesney-Lind (1995)/ U.S. F=13; M=35	Gang members	Self-reported delinquency	Family history Gang activities and organization	Qualitative interviews
Caspi et al. (1993)/ New Zealand F = 264	High school	History of aggression	Knowledge of delinquent peers	$t(127)=2.16$, $p<.05$
Caspi et al. (1993)/ New Zealand F = 264	High school Longitudinal Ages 13 and 15	Self-Report: Norm violating behaviour at age 13 Delinquency age 15 Persistence of delinquent activity	early maturers in mixed- vs. same-sex schools early maturers in mixed- vs. same-sex schools mixed vs. same-sex schools	$t(262) = 2.98$, $p < .01$ $t(261) = 2.02$, $p < .05$ $t(261) = 4.09$, $p < .001$
Serbin et al. (1998)/ Canada F = 428	Low SES children 20-yr longitudinal	Childhood aggression Childhood aggression	School achievement School dropout	$r = -.28$, $p < .01$ $r = .22$, $p < .01$
Ellickson et al. (1997)/ U.S. F = 2474; M = 2112	Longitudinal in grades 7 & 12 17-18 year olds	Self-report of: Persistent violence Some violence	School dropout (both genders) Low academic orientation (both genders) Low academic orientation (females only)	OR = 2.2, $p < .001$ OR = 2.3, $p < .001$ OR = 1.9, $p < .05$

Notes: F = female sample size; M = male sample size

relatively large (n = 100; n = 283 respectively), all female samples and completed within group comparisons examining the association between drug use and aggression.

As a context to reviewing these substance use studies and aggression, it is noteworthy that the review by Andrews et al. (1993) linking substance use and general criminogenic use with young offenders concluded that:

> "With overall high prevalence rates which include a large variety of users, the number of factors that differentiate substance abusers from nonabusers (within an offender sample) is relatively limited" (p. 115).

An exception to this general statement was provided by Huizinga, Menard and Elliott (1989). They suggested that the association of drug use and particular types of offending, particularly assaultiveness, may be more convincingly made based on additional information that includes the type and persistent use of certain types of substances by the young person.

Within the four studies comparing adolescent males and females on measures of aggression and drug use, Kingery, Mirzaee, Pruitt, Hurley and Heuberger (1991) showed a significant difference in relating drug use with aggression which was higher for males compared to females. The strongest evidence for a drug use - violence link within samples of adolescent girls was reported by Ellicson, Saner and MacGuigan (1997). These authors reported risk ratios in the association with long-term drug use and both "some/episodic" violence and "persistent" violence. Similarly, Jasper, Smith and Bailey (1998) reported that half of the violent girls in a clinical sample had been chronic illegal substance users. However, consistent with the Huizinga et al. (1989) reporting of possible mediators of drug use and persistent offending and violence, Kingery et al. (1991) also reported a significant relationship between risk taking and drug use within a group of violent girls. Finally, from qualitative interviews with 20 adolescent girls in a detention center, Anderson (1994) found that the girls' drug use was associated with gang membership, drinking, stealing and fighting.

Table 6. Substance Use and Aggression

Study/ Country	Sample/ Age	Violence Measure	Variable	Statistic
Kingery et al. (1991)/ U.S. F=533, M=471	High School Age Range 13-15 years	National Student Health Survey	Drug Use History Taking Risks	F= 6.99, p<.01 Girls: M=10.36 Boys: M=11.47 r=.53, p< .001
Horowitz & Pottieger (1991)/ U.S. F= 100, M= 291	Youths in justice system Age Range 14-17 years	Structured Interview; Measured Indexed Offenses	Drug Use History	Girls: 61.% Boys: 58.6% (χ^2 p<.14)
Brook et al. (1996)/ U.S. F=195, M=163	Random Sample of Families Longitudinal Study; youths followed from 5 years to 27 years	Self-Report Aggression	Self-Report Drug Use: Time(1`) Time(2) Time(3)	R^2=.24, p<.05 r=.19, p<.05 r=.20, p<.05 r=.08, ns
Ellickson, et al. (1997)/ U.S. F=2474, M=2112	High School and Dropouts Age Range 17-18 years	Self-Report Aggression	Self-Report Drug Use and: some violence multiple/persistent violence	 64%; Ratio (Some/None) 1.4 (p<.001) 73%; Ratio (Multiple and Persistent/None) 1.7 (p<.001)
Giancola et al. (1998)/U.S. F=283	Clinical (CS) and High School samples (HSS) M(CS) = 16.0 M(HSS) =15.7	Schedule for Affective Disorders and Schizophrenia: Anti-Social Behavior Questionnaire	Drug Use Screening Inventory Aggressive Behavior X Drug Use (Current) Aggressive Behaviour X Drug Use (Lifetime)	 ΔR^2= .03 (p<.05) ΔR^2=.07 (p<.001)
Jasper, et al. (1998)/ U.S. F=100	Clinical Sample Age Range 10-18 Years; M=14.6	File Review; Child Abuse Register	Interview Drug Screening: Drugs With Violence Drugs Without Violence	 50.0% 18.8% χ^2=8.85, p<.01

Table 6 continued

Study/ Country	Sample/ Age	Violence Measure	Variable	Statistic
Joe & Chesney-Lind (1995)/ U.S. F=13, M=35	Gang Members M=16.0	Interviews; Self-report delinquency and aggression	Personal/family characteristics; gang membership, use of illegal drugs	Qualitative summaries of interview-based information
Anderson (1994)/ U.S. F=20	Detention Center Range 13-18 years	Interviews	Drugs use and gang membership	Qualitative summaries

Notes: F = female sample size; M = male sample size

Personality Factors Associated with Aggression in Adolescent Girls

Five studies reported data linking personality factors and violence with adolescent girls (Table 7). In general, this part of the literature not only suffers from a limited number of studies, but also has used rather poorly defined constructs to measure both aggression and some form of internalizing conflict. With most of these five, the assessment of variables was based on individual clinician's judgement combined with a retrospective file review.

Two studies examined the prevalence rates of DSM-III diagnoses within a group of girls found to exhibit aggressive behaviours. Zoccolillo and Rogers (1991) found that close to 90% of aggressive girls fell within the conduct disorder category with the second most frequent classification being major depression (31%). Gabel and Shindledecker (1991) reported that girls classified as CD on the DSM-III who also showed some violence, had more improved outcomes on follow-up when compared to boys. Outcomes were measured in the frequency of discharge to the parental home. These findings are consistent with research on conduct disorder in younger girls (Henggeler, 1989).

The remaining studies in this area used self-report as measure of mental status. Ellickson et al. (1996) reported that aggressive girls rated themselves as "poor" in mental health compared to boys. Jasper et al. (1998) indicated that close to one in five of the girls seen in a forensic service having a violent offense indicated histories of fire-setting. In addition, seven per cent reported being involved in self-harm and close to nine per cent described themselves as suffering

from a mental illness, though the nature of the illness was not defined. When depression was assessed there was a correlation of .41 with aggression. Similar results relating depression and aggression have been reported for younger girls (Messer & Gross, 1994).

Table 7 Personality and Aggression

Study/ Country	Sample/ Age	Violence Measure	Variable	Statistic
Curtis (1991)/ U.S. F=36	At-risk delinquent girls and their mothers/ Range 11-15 yrs.	Self-report and clinical judgement	Self-Concept Scale: subject's rating mother's rating	Combined mother and daughter ratings R^2=.20, ns
Zoccolillo & Rogers (1991)/ U.S. F=55	Psychiatric hospital sample Age Range 13-16 years	Diagnostic Interview Schedule	DSM-III diagnoses: Conduct Disorder Major Depression No clear category	% falling in each diagnoses defined as aggressive: 87% 31% 42%
Gabel & Shindledecker (1991)/ U.S. F=84 M=65	Day treatment and in-patient hospital Age Range 12-18 years	Chart review and history taking	DSM-III and case management decisions: improved outcomes girls > boys	 X^2 =26.64, df=1, p<.001
Paikoff et al. (1991) / U.S. F=72	Private schools M=12 years	Aggression Scale Delinquency Scale	Depression	r=41, p<.001 r=42, p<.001
Ellickson et al. (1996)/ U.S. F=2474 M=2112	High School Age Range 17-18 years	Self-report Aggression	Self-report mental health status	t=3.90, p <.001; girls "poor mental health" compared to boys
Jasper et al. (1998)/ Great Britain F=100	Adolescent forensic service Age range 10-18 years	Medical charts; at least one assault	Medical charts: deliberate self-harm fire-setting mental illness	 7.0% 17.6% 8.8%

Notes: F = female sample size; M = male sample size

Critical Life Events and Their Association to Adolescent Female Aggression

In their review of potentially relevant variables that could contribute to the development of female adolescent aggression, Loeber et al. (1990) suggest that *specific life events*, what he refers to as "life stressors" in the lives of some girls, could influence or be influenced by the expression of aggression. Two studies identified in our review focused on specific events in the lives of adolescent girls and their potential link to aggression.

The study by Vanatta (1996; see Table 8) examined the association between suicidal behaviour and the expression of aggression. Using stepwise regression, this study noted the similarities across gender for the relationship of suicidal activity - defined as thoughts, plans or attempts in the previous thirty days. For males, the relationship was stronger (R^2=.39, β=.13, p<.001) than for females (R^2=.26, β=.13, p<.001), though Vanatta suggests that this may in part be due to the "content addressed in a majority of the survey questions, as many of them dealt with overt aggressive behaviors, more often related to males than females" (p. 158). It is noteworthy, as suggested by Vanatta, that "as the level of suicidality increased, so did the frequency of violent behavior" (p.159). Implications of such findings could assist in the assessment of lethality in suicidal behaviour *as being linked to* the expression of externalized aggression. However, two research issues would have to be addressed to further this understanding. The first would be to develop more studies with clinical samples using adolescent girls that looked at the association between suicidal behaviour and externalized violence. The second would be to use a broader definition of aggression that is more consistent with the means by which girls express aggression, e.g., through relational means as well as through overt means.

A second study examining the relation between violence and critical life events with adolescent girls focused on the link between violence and the likelihood of teen motherhood. Longitudinal data reported by Serbin, Cooperman, Peters, Lehoux, Stack and Schwartzman (1998) indicated that the risk ratio (Rr) for teen motherhood was highest for the group of adolescent girls identified as either aggressive (Rr = 2.17, p < .01) or as aggressive-withdrawn (Rr = 1.86, p < .01) compared to those identified as withdrawn only (Rr = 1.16, ns). It is important to note that for adolescent girls who had been identified as aggressive in childhood, education proved to be a protective factor in lowering their risk for teen motherhood.

Table 8 Critical Life Events and Adolescent Female Aggression

Study	Sample/ Age	Violence Measure	Variable	Statistic
Vanatta (1996)/ U.S. F=1672,M=1738	High School Age Range 12-17 years	Survey Instrument of Attitude and Behavior	Survey Instrument, suicidal behavior Suicidal Activity Suicidal Tendency	 R^2=.26, p<.001 R^2=ns
Serbin et al. (1998)/ Canada Study One F = 853 Study Two F = 428 Study Three F = 89	School-age participants Age Range 6-19	Peer nomination of aggression	 Teen mother Two or more children during adolescence Close spacing between births Delivery Complications	Risk Ratio CI 2.17* 1.29-3.65 1.47 0.92-2.35 0.59 0.29-1.22 0.44 0.17-1.13 *p<.01

Notes: F = female sample size; M = male sample size; CI = Confidence interval.

A Framework for Synthesizing Major Findings from Empirically Supported Associations of Aggression and Factors in the Lives of Adolescent Girls

As a way of summarizing the most meaningful outcomes from factors linked to aggression in adolescent girls, a framework using a social psychological model is adopted for purposes of directing attention to the major outcomes. Table 9 summarizes the factors and descriptions of specific variables associated with aggressive behaviour found in the studies reported. These findings include only those studies where reliable measures of both aggression and the associated variable are indexed beyond a single-self reported item. They also include only those studies where girls represented at least a third of the sample in mixed samples or they were all female samples (qualitative studies were excluded).

Table 9 Summary of Major Findings Relating Variables to Aggression with Adolescent Girls

FACTOR	DESCRIPTION
Family	Presence of negative communication Physical victimization by parents Maternal child management through reprimand Parental rejection Sexual victimization Low parental involvement Paternal verbal and physical aggression
School	School achievement High School dropout
Cognitions	Empathy and perspective taking Legitimization of use of force
Personality	Suicidal ideation Low self concept Depression
Drug use	Long term and varied drug use
Type and Form of Aggression	Girls in early adolescence more verbally aggressive than in later adolescence Girls less physically assaultive than boys Girls more verbally aggressive than boys at all ages Girl's victimization by stranger related to physical perpetration towards strangers Girls use indirect aggression more than boys

Seldom is there a *unitary construct* that provides a basis for prediction or even the portrayal of the association of specific variables with an outcome. The tendency in recent reviews within the criminogenic risk literature has been to view the associations with risk as being tied to a *framework* rather than a unitary construct (Andrews & Bonta, 1998). Quite simply, the factors that contribute to individual risk, whether it is for general antisocial risk or the threat of violence, are complex, including both systemic and individual variables.

The primary findings from this review of the violence literature with adolescent girls is similar in many respects to those found in the general risk literature in delinquency as well as the summary of studies with male adolescent violence. Yet, there are some important unique contributions to the understanding of violence reflected in the 46 studies and numerous comparisons reported in this review.

The first conclusion is that aggression with girls is itself not a unitary construct. Aggression reported with girls can be both relational as well as physical. This reflects the findings relating the association of relational or more indirect aggression with the physical/overt expressions of violence. Girls in early adolescence (under age 14) tend to be more relationally aggressive than girls in later adolescence; and girls overall tend to be more verbally aggressive than boys at all ages. Victim patterns with girls remain similar to those found with boys. That is, the most likely victim of adolescent aggression is someone of similar age and gender. However, the nature of escalation of violence would appear to be different. Boys are more likely to express their aggression as an impulsive act (Farrington, 1989), whereas findings from this review suggest girls escalate first through relational socialized manipulation that, in only some cases, achieves a physical expression (Artz, 1998).

Second, the information in Table 9 shows that there are similar findings associating variables with aggression with adolescent girls when compared to both the general criminogenic risk literature with girls and the violence literature with boys. The overlapping areas include: a heavy reliance on understanding the interactions within families; understanding the means by which some girls justify or legitimize the use of physical force in achieving interpersonal control; and a prolonged use of a variety of drugs. Simourd's (1993) meta-analysis of gender differences in the correlates of delinquency noted the importance of family relations and cognitions in the

assessment of risk *regardless of gender*. Similarly, Hawkins et al. (1999) reported strong associations with male violence and the family factors of parental violence, poor family management, parent's proviolence attitudes and family conflict; all variables that have been cited in this review with girl's violence.

However, studies with girls and violence are reporting concern in several unique areas. These include an understanding of intrapersonal conflict as reflected in a comorbidity of self-harm and suicidal ideation with physical aggression. While again studies in this area are still few in number, these findings with adolescent girls are similar to those reported with girls under the age of twelve years. Crick et al. (1995; 1996), Peterson et al. (1996), and Juon et al. (1997) suggested there may be a pathway with girls linking self-harm to physical harm directed towards others. Additionally, there appears to be a unique association for violence and girls who have been victimized physically or sexually within their families of origin. This should be of considerable interest and worthy of further study since girls more than boys are more likely to experience such victimization. What is missing as of yet in this literature are studies on the relationship of aggression with factors reflecting antisocial personality disorder. Factors in the general criminogenic risk literature such as egocentrism and risk taking have shown to be highly related to norm violating behaviour (Andrews & Bonta, 1998). To what extent these variables would be consistent with girls' aggression would be an important area for further investigation.

Measurement Issues

In the current review of 46 studies, 17 studies assessed aggression by using only a single item or a series of single items, 14 used standardized, self-report instruments, 8 studies used peer or teacher nominations of aggression, 5 used a qualitative interview method, and 2 studies used case records. Single-item measures do not have the stability of standardized measures which makes it more difficult to have confidence in results reported from such assessments. Peer-nominations are based on students naming three classmates who exhibit a certain aggressive behaviour. Aggression scores are then obtained by summing the nominations for each subject on this one item and dividing by the number of students in the class. While peer-nominations attempt to improve on the problem of research participants presenting a false self in self-report

measures, they still have the weakness of being based on single-item assessments of aggression.

One of the first priorities is developing assessment tools that more directly reflect issues and behaviours that are salient for adolescent girls. For example, Henning-Stout (1998) examined three measures of adolescent behaviour that are commonly used in research on violence: the Child Behaviour Checklist (CBCL; Achenback, 1991), the Social Skills Rating System (SSRS; Gresham & Elliott, 1990), and the Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992). She first had teachers review literature (e.g., Brown & Gilligan, 1992; Way, 1995) that described social-psychological barrieres to healthy adjustment in girls. They then developed and agreed on 22 phrases that reflected the social and affective issues for girls found in the literature. A team of three researchers then compared every item on the above three tests with the 22 phrases to determine a match with girls' experiences. On the CBCL, 14 of 112 (12.5%) items matched, on the SSRS teacher form, 7 of 54 (14%) items matched, and on the BASC teacher form, 10 of 138 (7.2%) items matched.

However, even for items that did match, the interpretation of some of those items did not fit with the experience of girls. For example, three items on the lie scale of the SSCS may reflect adolescent girls' idealized views of maintaining relationships rather than lying: (a) I never get my feelings hurt, (b) I agree with everything other people say, and (c) I never get mad. In addition, there were experiences of girls that were not tapped by any items such as their concerns about relational crises, vulnerable sexual boundaries, sexual abuse, sexual identity, and minority status. In other words, the perspectives and values of girls have not been a part of the development of scales used to assess them. Thus, results from studies that employ these three tests and similar tests, will likely not reflect accurately the experiences of the girls in that sample.

Because of these weaknesses in current assessment tools, it is imperative that new measures of aggression reflect the life experiences of adolescent girls be developed. In particular, such instruments need to address relational or indirect aggression, as well as physical aggression.

IMPLICATIONS OF THE RESEARCH TO DATE

> "The most promising solution isn't to continue squeezing girls into a justice system designed for boys, or to separate juvenile delinquents according to gender. Rather, gender-specific programming for girls is a comprehensive approach to female delinquency rooted in the experience of girls."
>
> (Peters, 1998, p. 2)

This review of the violence literature with adolescent girls provides a summary of the correlates of violence with this particular group. The 46 studies that were identified present data on the strength of association with certain variables and adolescent girls' violence within a psycho-social framework. The only other major review of the general youth criminogenic risk literature related to gender is the meta-analysis ported by Simourd and Andrews (1994). That review underscored the degree of *similarity of risk factors* between males and females. This review of the violence literature with adolescent girls suggests that while there are gender similarities in this literature as well, there are also some important differences. It is in the emerging set of differences that the implications for these findings reside.

First, in areas with respect to assessment, it is clear that girls express aggressive tendencies in ways different than boys. Particularly in the work by Crick and Dodge (1994; 1996) with girls under the age of twelve years and in the research by Pakaslahti and Keltikangas (1997; 1998) with adolescent girls, aggression with girls is more likely to be reflected in indirect or relational as opposed to overt forms. Conceptualizing aggression in girls as relational or social, has the potential for capturing better the developmental issues of adolescent girls (as identified by Debold, Wilson, & Malave, 1993; Gilligan, Lyons, & Hammer, 1990). Girls, more than boys, are socialized in the culture to value and define themselves within relationships (Artz, 1997). Thus, it makes sense that aggressive behaviour can take the form of harming aspects of the relationship between girls, rather than the more physical expression used by boys.

However, the direct relationship between relational and overt aggression with girls is not clear. Yet, what is evident, is that to assess aggression exclusive of this gender variant is to overlook an important contribution in understanding how girls express aggression. An adaptation

of the relational aggression measure for girls developed by Crick would be helpful in identifying potentially violent-prone pre-adolescent and adolescent girls *who may also express overt forms of aggression in their adolescent years.*

Second, unique to the studies on comorbidity with violence and risk with boys, girls who express aggression seem also to report higher levels of depression and suicidal ideation. In the Andrews et al. (1992) review, the percentage of violent, conduct disordered boys reporting some form of internalizing disorder ranged between 8 to 12 per cent. In the studies reported in this review, girls with high scores on aggression indices *who also reported elevations on depression* were reported at a rate close to 40 per cent. This rate was even higher in the studies looking at high risk youth in Chicago neighborhoods (Obeidallah & Earls, 1999). For violent girls, it would appear important to assess on the basis of the potential for the presence of an underlying mental health disorder that may be coinciding with a higher violence potential.

Third, girls are at a much higher risk for being victimized either physically or sexually both in their families of origin and through stranger contact. Studies in the current review identified the association of a history of victimization for girls with a higher incidence or scale elevation on measures of violence. The cycle of victimization leading to aggression with adolescent girls is an obvious area for further study. Several writers in this area, most notably Artz (1997), suggest that aggression for these girls may be viewed as a means of avoiding subsequent re-victimization. If further study were to support this relationship, support for girls once vicitimized may need to also include conflict resolution skills of some form in order to avert their revictimization through placement in the youth or adult criminal justice system. There is already some evidence for this relationship. Cunningham and Leschied (1998) reported the high incidence of victimization of women who subsequently came in contact with the adult justice system in one large urban center in Ontario.

Fourth, the review of the youth violence literature by Hawkins et al. (1998) concluded with the statement, "The evidence reviewed here indicates that violent behavior is a result of the interactions of contextual, individual and situational factors. Multivariate models that include these factors in theoretically linked causal sequences need to be tested to guide the development of multi-component violence prevention interventions that can significantly reduce risk for

violent behavior" (p. 146). Despite what is a limited number of studies, it would appear to this point, that violence as it is expressed in the lives of some adolescent girls needs to be seen separate from that of adolescent boys. Whatever causal explanations are to be tested cannot be made without the contribution of further knowledge with respect to variables describing interpersonal, intrapersonal and contextual factors affecting the lives of adolescent girls. The life course for boys and girls is simply different. While again minimal, there is evidence for example that age of onset for violence is later for girls than boys (Zoccolillo, 1993), and cross gender aggression is higher for girls than boys (Loeber & Stouthamer-Loeber, 1998). Some of the conclusions from the present analysis suggest additional promising areas to pursue. These would include history of victimization, exposure to family violence and social isolation. Loeber (1999) recently suggested a list of promising areas to explore. In addition to those mentioned here the list included: gender role, early onset of puberty, guilt feeling, empathy, sensitivity to rejection, life stressors and selective mating, the finding that adolescent women tend to select more anti-social men than men select anti-social women. Prevention and intervention strategies, in order to be inclusive, will need to be mindful of the differential contributions of these factors in the lives of girls.

Lastly, Loeber et al. suggested that, disentangling the variables associated with aggression and adolescent girls is an "important puzzle". The following section identifies a number of relevant areas for research that would help disentangle this puzzle.

Thoughts on a Research Agenda

As indicated in numerous sections of this report, the number of studies focusing on girls and aggression is limited compared to the emphasis given to the study of aggression with boys. Indeed, most of the studies measured combined effects with both genders, reporting data separately for males and females. There were few studies that looked solely at the issue of aggression within all female samples. As cited in the beginning of this review, at a time when concern regarding the increasing incidence rate of aggression and adolescent girls is at unprecedented levels, there seems minimal data to proceed with respect to service planning and policy formulation. Despite this limited data base, the previous section has drawn on numerous

sources to begin to present models of effective service sensitive to what knowledge base there is regarding aggression and girls. This section will outline some thoughts on promoting a research agenda.

Within Subject Comparisons

To this point, the majority of research on girls and aggression has assumed the 'add-and-stir' approach of combining female and male data with the goal of contrasting effects on a variety of correlates related to aggression (Hoyt & Scherer, 1998). While such approaches have paid off in cross gender comparisons on criminogenic risk with females and males (Simourd, 1994), the next step requires within group comparisons examining the relative contributions of effects of certain variables in predicting, or in the least being related to, the development of aggression in girls. While any conclusion in the present analysis must carry the caveat of 'the limited number of studies available', it would appear that most of the findings support a social psychological understanding of the association between aggression and factors both within the girls themselves and within their environment and experience. Important contributions need to be made based on understanding how girls differentially mediate their experience in developing or avoiding aggressive tendencies. For example, the data on the effects of girls' reactions to family violence suggests that some girls mimic the expression of violence as reported by their male counterparts, while others develop more internalized disorders. While one study hinted that girls exposed to family violence *who additionally had been victimized physically by their mothers* tended to be more overtly aggressive, there is only this one study that has attempted to isolate a factor related to differentiating overtly aggressive from internalized disordered girls experiencing family violence. More studies examining within group comparisons with all female samples need to be done.

Stability and Predictability of Overt Aggression in Adolescent Girls

A considerable literature has now developed reflecting the emergence of relationally aggressive girls, a literature focused almost exclusively on girls to the age of 12 years. These studies by Crick, Dodge and Bjorqvist, amongst others, have shed light on the differential

development of relational aggression in girls as opposed to overt aggression in boys. An important further development in this area needs to extend this examination to the potential continuance of girls' relational and/or physical aggression into the adolescent years. While such studies would hold obvious importance in contributing to the etiological understanding of adolescent girls' aggression, addressing this developmental issue would also be of considerable value in promoting prevention strategies that are mindful of the unique life circumstances of girls. Do relationally aggressive girls become overtly aggressive adolescents? There is some evidence reported by Crick that the inability to generate alternative solutions to conflict lies at the basis of girls' relational aggression prior to adolescence. Similarly, in the few studies examining adolescent girls' restrictive problem solving, there would appear to be a relationship of poor problem solving skills to the expression of aggression. Since studies have shown that girls differ in the way they interact socially around their aggressive tendencies, unique and important contributions could be made examining the developmental aspect of aggression in adolescent girls.

Relative Contribution of Internalized Disorders and Overt Aggression in Girls

One of the areas from this review that demonstrated differences in the development of aggression with girls contrasted with boys, was the accompaniment of depression, suicidal ideation and generalized anxiety disorders with girls who also exhibit aggressive tendencies. How the combination of the effects of internalizing and externalizing disorders develops is certainly of interest for the purposes of assessment and treatment with girls. Noteworthy, most of the programs in anger management (e.g., the Anger Replacement Training Program by Goldstein, Glick, Reiner, Zimmerman & Coultry, 1987) are developed on the basis of understanding how male youths develop and express aggression. Most of these programs look to developing awareness of violent tendencies and generating alternatives to resolving conflict. While some of these program components would apply to girls, understanding the contributions of depression to aggression would be a critically important area to consider in treatment with aggressive adolescent girls.

Understanding the Cycle of Victimization and Aggression

From the descriptive literature on preadolescent girls, it would appear, that for some girls who have been victimized either physically or sexually within their families, there is a greater tendency to develop overtly aggressive behaviour. This is a pattern different than that identified for boys. Further, there is considerable data that underscores the higher frequency of victimization rates for girls when compared to victimization rates for boys. Intervention strategies for victimized girls who develop aggressive tendencies needs to be furthered in refining intervention strategies for this high risk group of girls.

The Role of the Youth Justice System

To what extent is discretion within the justice system responsible for the reported increase of violence with adolescent girls? While data was presented suggesting that bias reflected in differential charge rates for less serious crimes increased official reporting rates for girls, this issue is far from being resolved. Yet, the increase is important to consider for at least two reasons. The first reflects the necessity for the justice system to be accountable if there is a bias slanted toward bringing a disproportionate number of girls with less serious crimes into the formal court process. The second is somewhat more pragmatic. If the system is slanted in favour of processing more lower risk aggressive girls, than necessary resources need to be made available to the courts in order to more effectively respond to the needs of this group.

Developing Gender Sensitive Assessment Measures

In the meta-analysis comparing general criminogenic risk predictors with males and females reported by Simourd and Andrews (1994), it was concluded that " the risk factors that are important for male delinquency are also important for female delinquency" (p. 208). While nothing in our reading of the violence literature would take exception to this comment, we have also appreciated that there may be factors unique to girls that are not yet accounted for in the general literature. This limitation may in part reflect the limitations of the current set of measures that are routinely used to assess criminogenic risk and violence potential with juveniles; an issue of general importance in the general psychometric literature on assessment as well as in the aggression literature (Henning-Stout, 1998).

As stated earlier in this report, because of the lack of research on relational aggression in adolescent girls, a gender-sensitive measure needs to be developed to assess relational aggression directly in girls. An adaptation for adolescents of a relational aggression measure for children by Crick may by one starting point, as well as incorporating some of the ideas gleaned from qualitative studies (e.g., Artz, 1998; Brotherton, 1996; Harris, 1994) about girls' beliefs concerning relational aggression.

A more gender-sensitive assessment approach may also uncover some unique contributions to the development of criminogenic risk with girls in general, and to the violence area in particular. Several important areas for inclusion have been identified in this review. Briefly they would include, but are not restricted to, comorbidity of internalizing disorders with aggression, effects of specific trauma and the effects of violence exposure within the family.

A Final Word

Finally, there is now a momentum, in part generated by increasing incidence rates of aggression with adolescent girls, to begin to develop a coherent research agenda with respect to this group. And, there is now a small but growing literature that supports useful directions in which to pursue a policy, assessment, treatment and prevention framework that is sensitive to the unique needs of adolescent girls who now find themselves in ever increasing numbers in the youth justice and social service delivery system. Additionally, some of the major contributors to the literature on risk and treatment are now coming forward with findings that shed light on this at-risk group. Look for example, to the longer term follow-ups of at-risk girls soon to be reported from the Pittsburgh studies of Loeber and Stouthamer-Loeber (1998) and to the reporting of a dedicated meta-analysis on the treatment effects for adolescent girls by Dowden and Andrews (1999). Further, the fall of 1999 marked the first conference in Canada dedicated to reviewing research findings on aggressive girls. This conference, held in Toronto, brought together many of the outstanding researchers in the field identified in this review. Additionally, The National Crime Prevention Center has identified girls as a priority group for service necessitated by the heretofore lack of specific direction afforded to communities on the unique needs of this group. It is the hope of the authors that this review of the literature will be but one more springboard on

which to launch a meaningful and informed agenda for research and services in responding to adolescent girls in need.

REFERENCES

Achenbach, T. M. (1991). Manual for the Child Behavior Checklist/4-18 and 1991 profile. Burlington: University of Vermont.

Alfaro, J. D. (1981). Report on the relationship between child abuse and neglect and later socially deviant behaviour. In R. J. Hunner & Y. W. Walker (Eds.), Exploring the relationship between child abuse and delinquency. Montclair, NJ: Allanheld, Osmun & Company.

Aluja-Fabregat, A., & Torrubia-Beltri, R. (1998). Viewing of mass media violence, perception of violence, personality and academic achievement. Personality and Individual Differences, 25, 973-989.

Anderson, N. L. R. (1994). Resolutions and risk taking in juvenile detention. Clinical Nursing Research, 3, 297-315.

Anderson, P. B. (1996). Correlates of college women's self-reports of heterosexual aggression. Sexual Abuse: A Journal of Research and Treatment, 8, 121-131.

Andrews, D. A., & Bonta, J. (1998). The psychology of criminal conduct (2nd. ed.). Cincinnati, OH: Anderson Publications.

Andrews, D. A., Leschied, A. W. & Hoge, R. D. (1992). The prediction and assessment of youth at risk: A social psychological approach. Toronto, ON: Ministry of Community and Social Services.

Artz, S. (1997). On becoming an object. Journal of Child and Youth Care, 11(2), 17-37.

Artz, S. (1998). Where have all the school girls gone? Violent girls in the school yard. Child and Youth Care Forum, 27, 77-107.

Artz, S., & Riecken, T. (1997). What, so what, then what?: The Gender Gap in school based violence and its implications for child and youth care practice. Child and Youth Care Forum, 24, 291-303.

Atlas, R. S., & Pepler, D. J. (1998). Observations of bullying in the classroom. The Journal of Educational Research, 92, 86-99.

Bardone, A. M., Moffitt, T. E., Caspe, A., Dickson, N., Stanton, W. R., & Silva, P. A. (1998). Adult physical health outcomes of adolescent girls with conduct disorder, depression, and anxiety. Journal of the American Academy of Child Adolescent Psychiatry, 37(6),594-600.

Beam, M., Gil-Rivas, V., Chen, C., & Greenberger, E. (1999). Risk and protective factors involved in adolescent problem behavior and depressed mood. Paper presented at SRCD '99, Albuquerque, New Mexico.

Becker, J. V. (1998). The assessment of adolescent perpetrators of childhood sexual abuse. The Irish Journal of Psychology, 19, 68-81.

Benedek, E. P. (1990). Female offenders. In Spurlock. Women's progress, promises and problems. NY: Premium Press.

Berger, R. J. (1989). Female delinquency in the emancipation era: A review of the literature. Sex Roles, 21, 375-399.

Bjorkqvist, K. (1994). Sex differences in physical, verbal and indirect aggression: A review of recent research. Sex Roles, 30(3/4), 177-188.

Bjorkqvist, K., Lagerspetz, K. M. J., & Kaukianinen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. Aggressive Behaviour, 18, 117-127.

Bjorkqvist, K., & Niemela, P. (1992). New trends in the study of female aggression. In K. Bjorkqvist, & P. Niemela (Eds.), Of mice and women: Aspects of female aggression. San Diego: Academic Press Inc.

Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. In K. Bjorkqvist & P. Niemela (Eds.), Of mice and women: Aspects of female aggression (pp. 51-64). San Diego: Academic Press Inc.

Borduin, C. M., & Schaeffer, C. M. (1998). Violent offending in adolescence: Epidemiology, correlates, outcomes and treatment. In T. P. Gulotta, G. R. Adams & R. Montemayor (Eds.), Delinquent violent youth: Theory and interventions. Thousand Oaks, CA: Sage Publications.

Bowers, L. B. (1990). Traumas precipitating female delinquency: Implications for assessment, practice and policy. Child and Adolescent Social Work, 7, 389-402.

Bowman, R. L., & Morgan, H. M. (1998). A comparison of rates of verbal and physical abuse on campus by gender and sexual orientation. College Student Journal, 32, 43-52.

Brook, J. S., Whiteman, M., & Finch, S. (1993). Role of mutual attachment in drug use: A longitudinal Study. Journal of the American Academy of Child Adolescent Psychiatry, 32, 982-989.

Brook, J. S., Whiteman, M., & Finch, S. (1992). Childhood aggression, adolescent delinquency, and drug use: A longitudinal study. The Journal of Genetic Psychology 153, 369-383.

Brook, J. S., Whiteman, M., Finch, S. J., & Cohen, P. (1996). Young adult drug use and delinquency: Childhood antecedents and adolescent mediators. Journal of the American Academy of Child Adolescent Psychiatry, 35, 1584-1592.

Brotherton, D. C. (1996). Smartness, toughness, and autonomy: Drug use in the context of gang female delinquency. Journal of Drug Issues, 26, 261-277.

Brown, L. M., & Gilligan, C. (1992). Meeting at the crossroads. New York: Ballantine.

Burbank, V. K. (1994). Cross-cultural perspectives on aggression in women and girls: An Introduction. Sex Roles, 30, 169-176.

Burman, M., Tisdall, K., & Brown, J. (1998, July). Researching girls and violence: Searching for a suitable methodology. Paper presented at the 14th World Congress of Sociology.

Butler, S., & Leschied, A. W. (1997). The Beliefs and Attitude Scale. Unpublished. Toronto, ON: Clarke Institute of Psychiatry.

Cairns, R. B., Cairns, B. D., Hongling, X., Man-Chi, L., & Hearne, S. (1998). Paths across generations: Academic competence and aggressive behaviors in young mothers and their children. Developmental Psychopathology, 34, 1162-1174.

Calhoun, G., Jurgens, J., & Chen, F. (1993). The neophyte female delinquent: A review of the literature. Adolescence, 28(110), 461-471.

Calicchia, J. A., & Moncata, S. J. (1993). Cognitive control differences in violent juvenile inpatients. Journal of Clinical Psychology, 49, 731-740.

Campbell, A. (1990). Female participation in gangs. In C. R. Huff (Eds.), Gangs in America (pp.163-182). Newbury Park, CA: Sage.

Carlo, G., Raffaelli, M., Laible, D. J., & Meyer, K. A. (1999). Why are girls less physically aggressive than boys? Personality and parenting mediators of physical aggression. Sex Roles, 40, 711-729.

Carlo, G., Roesch, S. C., & Melby, J. (1998). The multiplicative relations of parenting and temperament to prosocial and antisocial behaviors in adolescence. Journal of Early Adolescence, 18, 266-290.

Caspi, A., Lynam, D., Moffitt, T. E., & Silva, P. A. (1993). Unraveling girls' delinquency: Biological, dispositional and contextual contributions to adolescent misbehavior. Developmental Psychology, 29, 19-30.

Chalmers, J. B., & Townsend, M. A. R. (1990). The effects of training in social perspective: Taking on socially maladjusted girls. Child Development, 61, 178-190.

Chase, K. A., Treboux, D., O'Leary, D. K., & Strassberg, Z. (1998). Specificity of dating aggression and its justification among high risk adolescents. Journal of Abnormal Child Psychology, 26(6), 467-473.

Chesney-Lind, M., & Brown, M. (1999). Girls and violence. In D. J. Flannery & C. H. Huff (Eds.), Youth violence: Prevention, intervention and social policy. Washington, DC: American Psychiatric Press.

Chesney-Lind, M., & Sheldon, R. (1992). Girls delinquency and juvenile justice. Pacific Grove, CA: Brooks/Cole.

Choynowski, M. (1995). Does aggressiveness have a factorial structure? Personality and Individual Differences, 18, 167-187.

Cohen, J. (1988). Statistical power analyses for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Coie, J., Terry, R., Lenox, K., Lochman, J., & Hyman, C. (1995). Childhood peer rejection and aggression as predictors of stable patterns of adolescent disorder. Development and Psychopathology, 7, 697-713.

Costello, E. J., Loeber, R., & Stouthamer-Loeber, M. (1991). Pervasive and situational hyperactivity-confounding effect of informant: A research note. Journal of Child Psychology and Psychiatry, 32, 367-376.

Cotten, N. U., Resnick J., Browne, D. C, Martin, S. L., McCarraher, D. R., & Woods, J. (1994). Aggression and fighting behavior among African-American adolescents: Individual and family factors. American Journal of Public Health, 84(4), 618-622.

Cowan, B. R., & Underwood, M. K. (1995). Paper presented at the Meeting of the Oregon Academy of Science, Corvallis, OR.

Cowan, B. R., & Underwood, M. K. (1995). Sugar and spice and everything nice? A developmental investigation of social aggression among girls. Unpublished manuscript, Reed College.

Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. Development and Psychopathology, 7, 313-322.

Crick, N. R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. Child Development, 67, 2317-2327.

Crick, N. R. (1997). Engagement in gender normative versus nonnormative forms of aggression: Links to social-psychological adjustment. Developmental Psychology, 33, 610-617.

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multiinformant approach. Journal of Consulting and Clinical Psychology, 66, 337-347.

Crick, N. R., Bigbee, M. A., & Howes, C. (1996). Gender differences in children's normative beliefs about aggression: How do I hurt thee? Let me count the ways. Child Development, 67, 1003-1014.

Crick, N. R., & Casas, J. F. (1999). Relational and physical forms of peer victimization in preschool. Developmental Psychology, 35, 376-385.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. Psychological Bulletin, 115, 74-101.

Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in reactive and proactive aggression. Child Development, 67, 993-1002.

Crick, N., & Grotpeter, J. K. (1995). Relational aggression, gender and social-psychological adjustment. Child Development, 67, 710-722.

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. Child Development, 66, 710-722.

Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. Development and Psychopathology, 8, 367-380.

Crick, N. R., & Werner, N. E. (1998). Response decision processes in relational and overt aggression. Child Development, 69, 1630-1639.

Cullen, F. T., Wright, J. P., Brown, S., Moon, M. M., Blankenship, M. B., & Applegate, B. K. (1998). Public support for early intervention programs. Criminal Justice and Behavior, 44, 187-204.

Cunningham, A., & Leschied, A. W. (1998). Thinking about choices: Program reccommendations for women in conflict with the law with histories of abuse victimization. Hamilton, ON: Elizabeth Fry Society of Hamilton-Wentworth and Correctional Services Canada.

Cunningham, A., Leschied, A. W., & Currie, M. (1999). Review of the pre-court youth diversion program: Halton Regional Police Service. Unpublished manuscript. Burlington, Ontario.

Curry, D. G. (1998). Female gang involvement. Journal of Research in Crime and Delinquency, 35, 100-118.

Curtis, A. (1991). Perceived similarity of mothers and their early adolescent daughters and relationship to behavior. Journal of Youth and Adolescence, 20, 381-397.

Debold, E., Wilson, M., & Malave, I. (1993). Mother daughter revolution: From betrayal to power. New York: Addison-Wesley.

Dell, C. A., & Boe, R. (1997). Female young offenders in Canada: Recent trends. Ottawa, ON: Correctional Services Canada.

Depner, C. E., Leino, E. V., & Chun, A. (1992). Interparental conflict and child adjustment: A decade review and meta-analysis. Family and Conciliation Courts Review, 30, 323-341.

DeSouzza, J. M., & Doyal, G. T. (1998). Differences between violent female and male offenders: An explanatory study. American Journal of Forensic Psychology, 16, 67-87.

Devaud, C., Jeannin, A., Narring, F., Ferron, C., & Michaud, P.-A. (1998). Eating disorders among female adolescents in Switzerland: Prevalence and associations with mental and behavioral disorders. International Journal of Eating Disorders, 24, 207-216.

Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle of violence. Science, 250, 1678-1683.

Dodge, K. A., & Crick, N. R. (1990). Social information-processing bases of aggressive behavior in children. Personality and Social Psychology Bulleting, 16, 8-22.

Dolmadge, W. R. (1995). One less brick in the wall: The myths of youth violence and unsafe schools. Education and Law Journal, 7, 185-207.

Dowden, C., & Andrews, D. A. (1999). What works for female offenders: A meta-analytic review. Crime and Delinquency 45, 438-452..

Dunn, J., Slomkowski, C., & Beardsall, L. (1994). Sibling relationships from the preschool period through middle childhood and early adolescence. Developmental Psychology, 30, 315-324.

Durant, R. H., Getts, A. G., Cadenhead, C., & Woods, E. R. (1995). The association between weapon carrying and the use of violence among adolescents living in and around public housing. Journal of Adolescent Health, 17, 376-380.

Ellickson, P., Saner, H., & McGuigan, K. A. (1997). Profiles of violent youth: Substance use and other concurrent problems. American Journal of Public Health, 87, 985-991.

Eley, T. C., Lichtenstein, P., & Stevenson, J. (1999). Sex differences in the etiology of aggressive and nonagressive antisocial behavior: Results from two twin studies. Child Development, 70, 155-168.

Erdley, C. A., & Asher, S. R. (1998). Linkages between children's beliefs about the legitimacy of aggression and their behavior. Social Development, 7, 321-339.

Eron, L. D. (1992). Gender differences in violence: Biology and/or socialization? In K. Bjorkqvist & P. Niemela (Eds.), Of mice and women: Aspects of female aggression. San Diego: Academic Press Inc.

Everett, S. A., & Price, J. H. (1995). Students' perceptions of violence in the public schools: The metlife survey. Journal of Adolescent Health, 17, 345-352.

Fantuzzo, J., Boruch, R., Beriama, A., Atkins, M., & Marcus, S. (1997). Domestic violence and children: Prevalence and risk in five major U.S. cities. Journal of the American Academy of Child Adolescent Psychiatry, 36, 116-122.

Farrington, D. (1995). The development of offending and antisocial behavior from childhood: Key findings from the Cambridge study in delinquent development. Journal of Child Psychology and Psychiatry, 36, 929-964.

Farrington, D. P. (1996). Explaining the link between problem drinking and delinquency. Addiction, 91(4), 498-501.

Farrington, D. P. (1989). Early predictors of adolescent aggression and adult violence. Violence and Victims, 4, 79-100.

Feldman, S. S., & Gowen, L. K. (1998). Conflict negotiation tactics in romantic relationships in high school students. Journal of Youth and Adolescence, 27(6), 691-717.

Finkelstein, J. W., Von Eye, A., & Preece, M. A. (1994). The relationship between aggressive behavior and puberty in normal adolescents: A longitudinal Study. Journal of Adolescent Health, 15, 319-326.

Fling, S., Smith, L., Rodriguez, T., Thornton, D., Atkins, E., & Nixon, K. (1992). Videogames, aggression, and self-esteem: A survey. Social Behavior and Personality, 20, 39-46.

Frank, S. J., Jackson-Walker, S., Marks, M., Van Egeren, L. A., Loop, K., & Olson, K. (1998). From the laboratory to the hospital, adults to adolescents, and disorders to personality: the case of psychological reactance. Journal of Clinical Psychology, 54, 361-381.

Gabel, S., & Shindledecker, R. (1991). Aggressive behavior in youth: Characteristics, outcome, and psychiatric diagnoses. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 982-988.

Gabor, T. (1999). Trends in youth crime: Some evidence pointing to increases in the severity and volume of violence on the part of young people. Canadian Journal of Criminology, 385-92.

Gagne, M., & Lavoie, F. (1993). Young people's views on the causes of violence in adolescents' romantic relationships. Canada's Mental Health, 41, 11-15.

Garnefski, N., & Okma, S. (1996). Addiction-risk and aggressive/criminal behaviour in adolescence: Influence of family, school and peers. Journal of Adolescence, 19, 503-512.

Giancola, P. R., Mezzich, A. C., & Tarter, R. E. (1998). Disruptive, delinquent and aggressive behavior in female adolescents with a psychoactive substance use disorder: Relation to executive cognitive functioning. Journal of Studies in Alcohol, 59, 560-567.

Gilligan, C., Lyons, N. P., & Hanmer, T. J. (Eds.) (1990). Making connections: The relational worlds of adolescent girls at Emma Willard School. Cambridge, MA: Harvard University Press.

Glass, G. V., McGaw, B., & Smith, M. L. (1987). Meta-Analysis in social research. London, UK: Sage Publications.

Goldstein, A. P., Glick, S., Reiner, D., Zimmerman, D., & Coultry, T. M. (1987). Aggression replacement training. Champagne, IL: Research Press.

Goodwin, M. P., & Roscoe, B. (1990). Sibling violence and agonistic interactions among middle adolescents. Adolescence, 25(98), 451-467.

Grahan-Bermann, S. A., Cutler, S. E., Litzenberger, B. W., & Schwartz, W. E. (1994). Perceived conflict and violence in childhood sibling relationships and later emotional adjustment. Journal of Family Psychology, 8, 85-97.

Granic, I., & Butler, S. (1998). The relation between anger and antisocial beliefs in young offenders. Personality and Individual Differences, 24, 759-765.

Gresham, F. M., & Elliott, S. N. (1990). Social skills rating system. Circle Pines, MN: American Guidance Service.

Grotpeter, J. K., & Crick, N. R. (1996). Relational aggression, overt aggression, and friendship. Child Development,67, 2328-2338.

Hall, D. K., Mathews, F., & Pearce, J. (1998). Factors associated with sexual behavior problems in young sexually abused children. Child Abuse & Neglect, 22, 1045-1063.

Harris, M. G. (1994). Cholas, Mexican-American girls and gangs. Sex Roles, 30, 289-301.

Hausman, A. J., Spivak, H., & Prothrow-Stith, D. (1994). Adolescents' knowledge and attitudes about and experience with violence. Journal of Adolescent Health, 15, 400-406.

Hawkins, J. D. (1998). A review of predictors of youth violence. In R. Loeber & D. Farrington (Eds.), Serious and violent juvenile offenders: Risk factors and successful interventions. Thousand Oaks, CA: Sage Publications.

Heaven, P. C. L. (1994). Family of origin, personality, and self-reported delinquency. Journal of Adolescence, 17, 445-459.

Henggeler, S. W. (1989). Delinquency in adolescence. Newbury Park, CA: Sage.

Henington, C., Hughes, J. N., Cavell, T. A., & Thompson, B. (1998). The role of relational aggression in identifying aggressive boys and girls. Journal of School Psychology, 36, 457-477.

Henning-Stout, M. (1998). Assessing the behavior of girls: What we see and what we miss. Journal of School Psychology, 36, 433-453.

Herzberger, S. D., & Hall, J. A. (1993). Consequences of retaliatory aggression against siblings and peers: Urban minority children`s expectations. Child Development, 64, 1173-1785.

Hien, D., & Hien, N. M. (1998). Women, violence with intimates, and substance abuse: Relevant theory, empirical findings, and recommendations for future research. American Journal of Drug and Alcohol abuse, 24, 419-438.

Hollin, C. R. (1990). Cognitive-behavioral intervention with young offenders. Oxford, UK: Pergamon Press.

Horowitz, K., Weine, S., & Jekel, J. (1995). PTSD Symptoms in urban adolescent girls: Compounded community trauma. Journal of the American Academy of Child Adolescent Psychiatry, 34, 1353-1361.

Horowitz, R., & Pottieger, A. E. (1991). Gender bias in juvenile justice handling of seriously crime-involved youths. Journal of Research in Crime and Delinquency, 28, 75-100.

Howell, A. J., Reddon, J. R., & Enns, R. A. (1997). Immediate antecedents to adolescents` offenses. Journal of Clinical Psychology, 53, 355-360.

Hoyt, S., & Scherer, D. G. (1998). Female juvenile delinquency: Misunderstood by the juvenile justice system, neglected by social science. Law and Human Behavior, 22, 81-107.

Huesmann, R. L., Guerra, N. G., Zelli, A., & Miller L. (1992). Differing normative beliefs about aggression for boys and girls. In K. Bjorkqvist & P. Niemela (Eds.), Of mice and women: Aspects of female aggression. San Diego: Academic Press Inc.

Huizinga, D. H., Menard, S., & Elliottt, D. S. (1989). Delinquency and drug use: Temporal and developmental patterns. Justice Quarterly, 6, 419- 455.

Jaffe, P., Woolfe, D., Wilson, A., & Zak, L. (1985). Children of battered women: The relation of child behavior to family violence and maternal stress. Journal of Consulting and Clinical Psychology, 53, 657-665.

Jasper, A., Smith, C., & Bailey, S. (1998). One hundred girls in care referred to an adolescent forensic mental health service. Journal of Adolescence, 21, 555-568.

Joe, K. A., & Chesney-Lind, M. (1995). Just every mother's angel: An analysis of gender and ethnic variations in youth gang membership. Gender & Society, 9, 408-431.

Jouriles, E. N., & Norwood, W. D. (1995). Physical aggression toward boys and girls in families characterized by the battering of women. Journal of Family Psychology, 9, 69-78.

Juon, H., & Ensminger, M. E. (1997). Childhood, adolescent and young adult predictors of suicidal behaviors: A prospective study of African Americans. Journal Child Psychology and Psychiatry, 38, 553-563.

Keenan, K., & Shaw, D. S. (1994). The development of aggression in toddlers: A study of low-income families. Journal of Abnormal Child Psychology, 22, 53-77.

Keenan, K., & Shaw, D. S. (1997). Developmental and social influences on young girls' early problem behavior. Psychological Bulletin, 121, 95-113.

Kingery, P. M., Mirzaee, E., Pruitt, B. E., Hurley, R. S., & Heuberger, G. (1991). Rural communities near large metropolitan areas: Safe havens from adolescent violence and drug use? Health Value, 15, 39-48.

Kipke, M. D., Simon, T. R., Montgomery, S. B., Unger, J. B., & Iversen, E. F. (1997). Homeless youth and their exposure to and involvement in violence while living on the streets. Journal of Adolescent Health, 20, 360-367.

Kroupa, S. E. (1988). Perceived parental acceptance and female juvenile delinquency. Adolescence, 23, 171-185.

Kruttschnitt, C. (1996). Contributions of quantitative methods to the study of gender and crime, or bootstrapping our way into the theoretical thicket. Journal of Quantitative Criminology, 12, 135-161.

Kupersmidt, J. B., & Coie, J. D. (1990). Preadolescent peer status, aggression, and school adjustment as predictors of externalizing problems in adolescence. Child Development, 61, 1350-1362.

Ladame, F. (1992). Suicide prevention in adolescence: An overview of current trends. Journal of Adolescent Health, 13, 406-408.

Lahey, B. B., Loeber, R., Quay, H. C., Applegate, B., Shaffer, D., Waldman, I., Hart, E. L., McBurnett, K., Frick, P. J., Jensen, P. S., Dulcan, M. K., Canino, G., & Bird, H. R. (1998). Validity of DSM-IV subtypes of conduct disorder based on age of onset. Journal of the American Academy of Child Adolescent Psychiatry, 37, 435-442.

Langhinrichsen-Rohling, J., & Neidig, P. (1995). Violent backgrounds of economically disadvantaged youth: Risk factors for perpetrating violence? Journal of Family Violence, 10, 379-397.

Lindeman, M., Harakka, T., & Keltikangas-Jarvinen, L. (1997). Age and gender differences in adolescents' reactions to conflict situations: Aggression, prosociality, and withdrawal. Journal of Youth and Adolescence, 26, 339-351.

Lipsey, M. W., & Wilson, D. B. (1997). Effective intervention for serious juvenile offenders: A synthesis of research. Paper prepared for the OJJDP study group on serious and violent juvenile offenders.

Loeber , R., Green, S. M., & Lahey, B. B. (1990). Mental health professionals' perception of the utility of children, mothers, and teachers as informants on childhood psychopathology. Journal of Clinical Child Psychology, 19, 136-143.

Loeber, R., & Keenan, K. (1994). Interaction between conduct disorder and its comorbid conditions: Effects of age and gender. Clinical Psychology Review 14, 497-523.

Loeber, R., & Stouthamer-Loeber, M. (1998). Development of juvenile aggression and violence: Some common misconceptions and controversies. American Psychologist, 53, 242-259.

Loeber, R. (1999). Youth violence: An overview of research. Presentation to the Department of Child Psychiatry and the Institute for Anti-Social and Violent Youth, May, Toronto, Ontario.

MacLennan, B. W. (1994). Groups for poorly socialized children in the elementary school. Journal of Child and Adolescent Group Therapy, 4, 243-250.

Malinosky-Rummell, R., & Hansen, D. J. (1993). Long-term consequences of childhood physical abuse. Psychological Bulletin, 114, 68-79.

Mallon, F., & Best, C. (1995). Trauma in school: A psychological service response. Educational Psychology in Practice, 10, 231-237.

Marcus, R. F., & Gray, L. Jr. (1998). Close relationships of violent and nonviolent african american delinquents. Violence and Victims, 13, 31-46.

Mathews, F. (1997). The adolescent sex offender field in Canada: Old problems, current issues, and emerging controversies. Journal of Child and Youth Care, 11, 55-62.

Mathews, F. (1999). Girls' use of violence and aggression. Orbit, 29, 10-15.

Mathews, F. (1998). Violent and aggressive girls. Journal of Child and Youth Care, 11, 1-23.

Mathur, S. R., & Rutherford, Jr. R. B. (1994). Teaching conversational social skills to delinquent youth. Behavioral Disorders, 19, 294-305.

Messer, S. C., & Gross, A. M. (1994). Childhood depression and aggression: A covariance structure analysis. Behaviour Research and Therapy, 32, 663-677.

Miller, D. B. (1995). Treatment of adolescent interpersonal violence: A cognitive-behavioral group approach. Journal of Child and Adolescent Group Therapy, 5, 191-200.

Miller, J. (1998). Gender and victimization risk among young women in gangs. Journal of Research in Crime and Delinquency, 35, 429-453.

Moretti, M. M., Lessard, J. C., Wiebe, V. J., & Reebye, P. (1999). Comorbidity in adolescents with conduct disorder: The gender paradox. Unpublished manuscript, Simon Fraser University, British Columbia.

Morris, R. E., Harrison, E. A., Knox, G. W., Tromanhauser, E., Marquis, D. K., & Watts, L. L. (1995). Health risk behavioral survey from 39 juvenile correctional facilities in the United States. Journal of Adolescent Health, 17, 334-344.

Nahulu, L. B., Andrade, N. N., Makini, G. K., Yuen, N. Y. C., McDermott, J. F., Danko, G. P., Johnson, R. C., & Waldron, J. A. (1996). Psychosocial risk and protective influences in Hawaiian adolescent psychopathology. Cultural Diversity and Mental Health, 2, 107-114.

Newhill, C. E., Mulvey, E. P., & Lidz, C. W. (1995). Characteristics of violence in the community by female patients seen in a psychiatric emergency service. Psychiatric Services, 46, 785-789.

Obeidallah, D. A., & Felton, F. J. (1999). Adolescent girls: The role of depression in the development of delinquency. Washington, D.C.: Office of Juvenile Justice and Delinquency, U.S. Department of Justice.

O'Keefe, M. (1994). Linking marital violence, mother-child/father-child aggression, and child behavior problems. Journal of Family Violence, 9, 63-78.

Olweus, D. (1987). Schoolyard bullying: Grounds for intervention. School Safety, 4-11.

Osterman, K., Bjorkqvist, K., Lagerspetz, K. M. J., Charpentier, S., Caprara, G. V., & Pastorelli, C. (1999). Locus of control and three types of aggression. Aggressive Behavior, 25, 61-65.

Owens, L. D., & MacMullin, E. E. (1995). Gender differences in aggression in children and adolescents in South Australian schools. International Journal of Adolescence and Youth, 6, 21-35.

Paik, H., & Comstock, G. (1994). The effects of television violence on antisocial behavior: A meta-analysis. Communication Research, 21, 516-546.

Paikoff, R. L., Brooks-Gun, J., & Warren, M. P. (1991). Effects of girls hormonal status on depressive and aggressive symptoms over the course of one year. Journal of Youth and Adolescence, 20, 191-215.

Pajer, K. A. (1998). What happens to "bad" girls? A review of the adult outcomes of antisocial adolescent girls. American Journal of Psychiatry, 155, 862-870.

Pakaslahti, L., & Keitikangas-Jarvinen, L. (1997). The relationships between moral approval of aggression, aggressive problem-solving strategies, and aggressive behavior in 14 year old adolescents. Journal of Social Behaviour and Personality, 12, 905-924.

Pakaslahti, L., & Keltigangas-Jarvinen, L. (1998). Types of aggressive behavior among aggressive-preferred, aggressive non-preferred, non-aggressive preferred and non-aggressive non-preferred 14-year-old adolescents. Personality and Individual Differences, 24(6), 821-828.

Pakaslahti, L., Spoof, I., Asplun-Peltola, R., & Keitikangas-Jarvinen, L. (1998). Parents' social problem solving strategies in families with aggressive and non-aggressive girls. Aggressive Behavior, 24, 37-51.

Palumbo, D. J., & Hallett, M. A. (1993). Conflict versus consensus models in policy evaluation and implementation. Evaluation and Program Planning, 16, 11-23.

Patterson, G. (1992). Developmental changes in antisocial behaviour. In R. Dev. Peters, R. J. McMahon & V. L. Quinsey (Eds.), Aggression and violence throughout the lifespan. Newbury Park, CA: Sage.

Patterson, G. R., DeBarsyshe, B. D., & Ramsey, S. (1989). A developmental perspective on antisocial behavior. American Psychologist, 44, 329-335.

Pepi, C. L. O. (1998). Children without childhoods: A feminist intervention strategy utilizing systems theory and restorative justice in treating female adolescent offenders. In J. Harden & M. Hill (Eds.), Breaking the rules: Women in Prison and Feminist Therapy (pp. 85-101). Binghamton, NY: Harrington Park Press.

Pepler, D. J., & Craig, W. (1999). Aggressive Girls: Development of Disorder and Outcomes. Downsview, ON: LaMarsh Center for Violence and Conflict Resolution, York University.

Pepler, D. J., & Craig, W. (1999). Aggressive girls: Development of disorder and outcomes (Report No. 57). York University: The LaMarsh Research Centre.

Pepler, D. J., Craig, W. M., & Roberts, W. L. (1998). Observations of aggressive and nonaggressive children on the school playground. Merrill-Palmer Quarterly,44, 55-76.

Peters, S. R. (1998). Guiding principles for promising female programming: An inventory for best practice. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

Peterson, B. S., Zhang, H., Lucia, R. S., King, R. A., & Lewis, M. (1996). Risk factors for presenting problems in child psychiatric emergencies. Journal of the American Academy of Child Adolescent Psychiatry, 35, 1162-1173.

Pulkkinen, L. (1992). The path to adulthood for aggressively inclined girls. In K. Bjorkqvist & P. Niemela (Eds.), Of mice and women: Aspects of female aggression (pp. 113-121). San Diego: Academic Press Inc.

Raine, A., Venables, P. H., & Mednick, S. A . (1997). Low resting heart rate at age 3 years predisposes to aggression at age 11 years: Evidence from the Mauritius child health project. Journal of the American Academy of Child Adolescent Psychiatry, 36, 1457-1464.

Reitsma-Street, M. (1999). Justice for Canadian girls: A 1990's update. Canadian Journal of Criminology, 335-363.

Reynolds, C. R., & Kamphaus, R. W. (1992). Behavior assessment system for children. Circle Pines, MN: American Guidance Service.

Rice, M. E. (1997). Violent offender research and implications for the criminal justice system. American Psychologist, 52, 414-423.

Robinson, R. A. (1994). Private pain and public behaviors: Sexual abuse and delinquent girls. In C. K. Reissman (Ed.), Qualitative studies in social work research (pp. 73-94). California: Sage.

Rosenbaum, J. L. (1989). Family dysfunction and female delinquency. Crime & Delinquency, 35, 31-44.

Rosenbaum, J. L., & Chesney-Lind, M. (1994). Appearance and delinquency: A research note. Crime & Delinquency, 40, 250-261.

Rouse, L. P., & Eve, R. A. (1991). Explaining delinquent behavior among adolescent girls: Internal social control and differential association. Clinical Sociology Review, 162-177.

Rubin, K. H., Hastings, P., Chen, X., Stewart, S., & McNichol, K. (1998). Intrapersonal and maternal correlates of aggression, conflict, and externalizing problems in toddlers. Child Development, 69, 1614-1629.

Rys, G. S., & Bear, G. G. (1997). Relational aggression and peer relations: Gender and developmental issues. Merrill-Palmer Quarterly, 43, 87-106.

Sanderson, A., & McKeough, A. (1999). Stories that shape lives: A narrative inquiry of children and adolescents at academic risk due to behavioural and/or social factors. Unpublished manuscript.

Saner, H., & Ellickson, P. (1996). Concurrent risk factors for adolescent violence. Journal of Adolescent Health, 19, 94-103.

Saunders, E. B., & Awad, G. A. (1991). Adolescent female firesetters. Canadian Journal of Psychiatry, 36, 401- 404.

Schissel, B., & Fedec, K. (1999). The selling of innocence: The gestalt of danger in the lives of youth prostitutes. Canadian Journal of Criminology, 41, 33-56.

Schlossman, S., & Cairns, R. B. (1993). Problem girls: Observations on past and present. In G. Elder, J. Modell & R. D. Parke (Eds.), Children in time and place: Developmental and historical insights (pp. 110-130). New York: Cambridge Press.

Schramm, H. (1998). Young women who use violence: Myths and Facts. Calgary, AB: Elizabeth Fry Society of Calgary.

Schwartz, D., McFadyen-Ketchum, S. A., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1998). Peer group victimization as a predictor of children`s behavior problems at home and in school. Development and Psychopathology, 10, 87-99.

Sege, Robert D. (1998). Life imitating art: Adolescents and television violence. In Gullotta, T. P., Adams, G. R. (Eds.), Delinquent violent youth: Theory and interventions. Advances in adolescent development: An annual book series (Vol. 9, pp. 129-143). Thousand Oaks, CA: Sage Publications.

Serbin, L. A., Cooperman, J. M., Peters, P. L., Lehoux, P. M., Stack, D. M., & Schwartzman, A. E. (1998). Intergenerational transfer of psychosocial risk in women with childhood histories of aggression, withdrawal, or aggression and withdrawal. Developmental Psychology, 34, 1246-1262.

Serbin, L. A., Peters, P. L., & Schwartzman, A. E. (1996). Longitudinal study of early childhood injuries and acute illnesses in the offspring of adolescent mothers who were aggressive, withdrawn or aggressive-withdrawn in childhood. Journal of Abnormal Psychology, 105, 500-507.

Serbin, L. A., & Stack, D. M. (1998). Introduction to the special section: Studying intergenerational continuity and the transfer of risk. Developmental Psychology, 34, 1159-1161.

Seydlitz, R. (1991). The effects of age and gender on parental control and delinquency. Youth and Society, 23, 175-201.

Seydlitz, R., & Jenkins, P. (1998). The influence of families, friends, schools, and communities on delinquent behavior. In T. P. Gullotta, G. R. Adams & R. Montemayor (Eds.), Delinquent violent youth: Theory and interventions. Thousand Oaks, CA: Sage.

Shamsie, J. (Ed.) (1998). What happens to bad girls? Youth Update, 16(2).

Simourd, D. (1997). The criminal sentiments scale-modified and pride in delinquency scale: Psychometric properties and construct validity of two measures of criminal attitudes. Criminal Justice and Behavior, 24, 52-70.

Simourd, L., & Andrews, D. A. (1994). Correlates of delinquency: A look at gender differences. Forum on Corrections Research, 6, 26-31.

Sommers, I., & Baskin, D. R. (1993). The situational context of violent female offending. Journal of Research in Crime and Delinquency, 30, 136-162.

Sommers, I., & Baskin, D. R. (1994). Factors related to female adolescent initiation into violent street crime. Youth and Society, 25, 468-489.

Statistics Canada. (1998). The StatsCAN Daily, Profile of Youth Crime. Ottawa, ON: The author.

Statistics Canada. (1999). The Daily, Youth Justice Statistics. Ottawa, ON: The author.

Stattin, H., & Magnusson, D. (1989). The role of early aggressive behavior in the frequency, seriousness, and types of later crime. Journal of Consulting and Clinical Psychology, 57, 710-718.

Steinberg, M. S., & Dodge, K. A. (1983). Attributional bias in aggressive adolescent boys and girls. Journal of Social and Clinical Psychology, 1, 312-321.

Stephens, D. E., & Bredemeier, B. J. L. (1996). Moral atmosphere and judgments about aggression in girls' soccer: Relationships among moral and motivational variables. Journal of Sport and Exercise Psychology, 18, 158-173.

Szatmari, P., Boyle M., & Offord, D. R. (1989). ADHD and CD: Degree of diagnostic overlap and difference among correlates. Journal of the American Academy of Child and Adolescent Psychiatry, 28, 865-872.

Talbott, E. (1997). Reflecting on antisocial girls and the study of their development: Researchers' views. Exceptionality, 7, 267-272.

Tisak, M. S., Lewis, T., & Jankowski, A. M. (1997). Expectations and prescriptions for responding to peer aggression: The adolescent offenders perspective. Aggressive Behavior, 23, 149-160.

Tisak, M. S., & Tisak, J. (1996). My sibling's but not my friend's keeper: Reasoning about responses to aggressive acts. Journal of Early Adolescence, 16, 324-339

Tolan, P. (1988). Socioeconomic, family and social stress correlates of adolescent antisocial and delinquent behavior. Journal of Abnormal and Child Psychology, 16, 317-331.

Towberman, D. B. (1992). Client-counselor similarity and the client's perception of the treatment environment. Journal of Offender Rehabilitation, 18, 159-171.

Tuesday, V. J. (1998). Girls in jail. In J. Harden & M. Hill (Eds.), Breaking the rules: Women in Prison and Feminist Therapy (pp.127-139). Binghamton, NY: Harrington Park Press.

Tulloch, M. I. (1995). Evaluating aggression: School students' responses to television portrayals of institutionalized violence. Journal of Youth and Adolescence, 24, 95-115.

Underwood, M. K., Kupersmidt, J. B., & Coie, J. D. (1996). Childhood peer sociometric status and aggression as predictors of adolescent childbearing. Journal of Research on Adolescence, 6, 201-223.

Valois, R. F., McKeown, R. E., Garrison, C. Z., & Vincent, M. L. (1995). Correlates of aggressive and violent behaviors among public high school adolescents. Journal of Adolescent Health, 16, 26-34.

Vannatta, R. A. (1996). Adolescent gender differences in suicide-related behaviors. Journal of Youth and Adolescence, 26, 559-568.

Vannatta, R. A. (1996). Risk factors related to suicidal behavior among male and female adolescents. Journal of Youth and Adolescence, 25, 149-160.

VanOostrum, N., & Horvath, P. (1993). The effects of hostile attribution on adolescents' aggressive responses to social situations. Canadian Journal of School Psychology, 13, 48-59.

Vernberg, E. M., Ewell, K. K., Beery, S. H., Freeman, C. M., & Abwender, D. A. (1995). Aversive exchanges with peers and adjustment during early adolescence: Is disclosure helpful? Child Psychiatry and Human Development, 26, 43-59.

Vernberg, E. M., Jacobs, A. K., & Hershberg, S. L. (1999). Peer victimization and attitudes about violence during early adolescence. Journal of Clinical Child Psychology, 28, 386-395.

Viale-Val, G., & Sylvester, C. (1993). Female delinquency. In M. Sugar (Ed.), Female Adolescent Development (2nd ed.). New York: Brunner/Mazel Inc.

Viemero, V. (1996). Factors in childhood that predict later criminal behavior. Aggressive Behavior, 22, 87-97.

Vissing, Y. M., Straus, M. A., Gelles, R. J., & Harrop, J. W. (1991). Verbal aggression by parents and psychosocial problems of children. Child Abuse and Neglect, 15, 223-238.

Watts, D. W. & Ellis, A. M. (1993). Sexual abuse and drinking and drug use: Implications for prevention. Journal of Drug Education, 23, 183-200.

Walters, K. S., & Inderbitzedn, H. M. (1998). Social anxiety and peer relations among adolescence: Testing a psychobiological model. Journal of Anxiety Disorders, 12, 183-198.

Way, N. (1995). "Can't you see the courage, the strength that I have?" Listening to urban adolescent girls speak about their relationships. Psychology of Women Quarterly, 19, 107-128.

Webster, D. W., Gainer, P. S., & Champion, H. R. (1993). Weapon carrying among inner-city junior high school students: Defensive behavior vs. aggressive delinquency. American Journal of Public Health, 83, 1604-1608.

Week, R., & Widom, C. S. (1998). Self-report of early childhood victimization among incarcerated adult male felons. Journal of Interpersonal Violence, 13, 346-361.

Wekerle, C., & Wolfe, D. A. (1998). The role of child maltreatment and attachment style in adolescent relationship violence. Development and Psychopathology, 10, 571-586.

White, J. L., Moffitt, T. E., & Silva, P. A. (1989). A prospective replication of the protective effects of IQ in subjects at high risk for juvenile delinquency. Journal of Consulting and Clinical Psychology, 57, 719-734.

White, J. W., & Kowalski, R. M. (1994). Deconstructing the myth of the nonaggressive woman: A feminist analysis. Psychology of Women Quarterly, 18, 487-508.

Widom, C. S., & White, H. R. (1997). Problem behaviors in abused and neglected children grown up: Prevalence and co-occurrence of substance abuse, crime and violence. Criminal Behavior and Mental Health, 7, 287-310.

Woodward, L.J. & Fergusson, D. M. (1999). Childhood peer relationship problems and psychosocial adjustment in late adolescence. Journal of Abnormal Child Psychology, 27, 1, 87-104.

Zahn-Waxler, C., Friedman, R. J., Cole, P. M., Mizuta, I., & Hiruma, N. (1996). Japanese and United States preschool children's responses to conflict and distress. Child Development, 67, 2462-2477.

Zoccolillo, M. (1993). Gender and the development of conduct disorder. Development and Psychopathology, 5, 65-78.

Zoccolillo, M., & Rogers, K. (1991). Characteristics and outcome of hospitalized adolescent girls with conduct disorder. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 973-981.